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# THE VIOLINIST'S MANUAL



# THE VIOLINIST'S MANUAL

A Treatise on the Construction, Choice, Care,  
Adjustment, Study and Technique of the Violin

*Containing much Useful and Practical Advice regarding  
the Violin and the Bow*

NUMEROUS ILLUSTRATIONS AND FIGURES

BY

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WILLIAM REEVES  
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To my Wife,  
Gladys Marion,  
this Work is Dedicated.





## PREFACE

AT the present time, when many take up the study of the violin, no apology is required for an additional volume on that fascinating instrument.

In this work endeavour has been made to place before the average student, violinist and uninitiated player all details of interest and technique relating to the violin. It is hoped that the following pages can be used as a reference manual for those interested in matters appertaining to the art of violin playing and prove of assistance to students of all grades.

With a view to such utility, music type examples have been omitted and written description and instruction given under sub-headings, also photographic illustrations have been added showing the various positions of the bow, violin, hand, arm and fingers, etc. These have been specially taken for the book, and those illustrating the various specimens of the famous makers have been photographed, in the majority of cases, from the original instruments.

Faults, no doubt, can be found, and some teachers may not be in full agreement with all the advice and methods set forth, but importance has been given to all points, including what may at first sight be considered as minor ones; but it should be remembered, however, that it is these minor points that go to build up the great and important whole. Recognised and experienced authorities, both foreign and English, have been referred to when an example or explanation has required emphasising; added to this the knowledge gained by the author as a teacher, player and orchestral conductor of many years' experience, the present manual will perhaps prove of value to all students.

One aspect in particular, can be specified in the study of instrumental music, and that is, hand, arm and finger gymnastic exercises. This is a great factor in playing and should receive more attention in the training of pupils than is the case. Mention has been given to this branch of muscular development in the present work.

A systematic course of study has been outlined which should prove of assistance to those unable to obtain regular and competent instruction. Tables are given dealing with this part of teaching. They have been graded from the elementary stages to the difficult, and every subject has been included; this

should make them of especial value to the self-taught student, or to those unable through force of circumstances, to obtain tuition.

Acknowledgments and thanks are due to those friends and others who loaned and gave permission for publication of the photographs of their valued instruments. Foremost among which was the late lamented Mr. William Honeyman; also to Mr. Parton; Mr. S. Bloomfield; Messrs. W. H. and A. Hill, for permission to reproduce the Betts Stradivarius from their specialised volume on that famous maker; and to Messrs. Hart and Sons, for two of the illustrations from their standard and well merited work, "The Violin," by G. Hart. Finally I am indebted to the various authors and publishers whose works have been quoted. Sources of which are stated in the context.

HENRY F. GOSLING.

ILFORD, ESSEX.



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# THE VIOLINIST'S MANUAL

## PART I.—ORIGIN, CONSTRUCTION AND ADJUSTMENT OF VIOLIN AND BOW.

### CHAPTER I.

#### Origin.

THE origin and evolution of the violin are full of romance and interest, but it is not the intention of the present writer to deal exhaustively with its history. Its definite birthplace is difficult to determine. Each ancestry attributed to it appears conclusive, but authorities differ; some favour a Grecian source, others Indian or Arabian sources. Many theories have been propounded, one that it has grown from the Greek lyre, through such ancient instruments as the monochord, the tromba-marina, the crwth, crowd, rebec, gigue and viol; another that its rise is to be found in Eastern lands, descending through an instrument known as the rebab, which was used and brought into Spain by the Arabs about the eighth century.

The bulk of the evidence suggests that India is the real birthplace of all instruments played with the bow. India and Arabia contain the most ancient traces of an advanced civilisation. Musical instruments discovered there show a construction of primitive character, but their appearance leaves very little doubt that they were the prototypes of the violin family of to-day.

### **The Ravanastron.**

The earliest known instrument of the string species played with a bow is the ravanastron. M. Fétis, writing of this instrument of Indian civilisation, says:

"It consists of a small hollow cylinder, box or cup of sycamore wood, eleven centimetres long and five centimetres wide. Upon one side of this box is stretched a piece of broad-scaled boa-skin, the position of which causes it to act as a sound-board or resonance table. To one end of the box is fixed a piece of wood fifty-five centimetres long, bored at its upper end with two holes. This piece of wood serves as the neck of the instrument, the two strings being fastened to pegs fitted into the two holes at the end of the neck. On the under side of this neck is fastened a strip of serpent skin which serves as a holder. The bridge is eighteen millimetres in length, slanting on the upper side, and cut out below in rectangular fashion so as to make two feet. The strings are of gazelle gut. The bow

consists of a light piece of bamboo reed, and in one end of this reed a hollow place is made in which to fasten a bundle of horse-hair, which is drawn tight and fastened at the other end by a very flexible braided reed tightly wound round it" (Plate I, Fig. 1.)

Indian traditions attribute this instrument to a king of Ceylon named Ravana, who reigned 5,000 years before the Christian era, but of course tradition has its privileges.

### **The Rebab.**

The Arabs used an instrument similar to, but differing in outward form, from the ravanastron; this was known as the rebab, rebeb, or rebek.

In appearance it is oval-shaped, and it has one, two, and sometimes three or more strings tuned in fourths, the belly having two half-moon shaped sound holes; there are a bridge and tail-piece. The tone is of a muffled and melancholy quality. (Plate I, Fig. 2.)

### **The Crwth.**

Before the end of the eighth century A.D. stringed instruments were practically unknown in Europe, but a Bishop of Poitiers, Venantius Fortunatus, who died about A.D. 609, mentions in his writings that the crwth or crouth (Plate I, Fig. 3) of the Welsh bards was known in his day, and that it was probably known in England before his own time. In

looking back to about the middle of the fifth century, when the Saxons were conquerors of southern England, it has been assumed that they introduced the crwth, but this assumption does not stand on a very firm footing; the Welsh were never subdued by the Saxons, and the use of the instrument was almost restricted to Wales. It is more reasonable to regard its descent as Indian. We are told that the last player on the crouth or crwth was a Welshman, John Morgan. He lived in the Isle of Anglesey, and died about 1720. The claim of the crwth to be the oldest bowed instrument in Europe rests chiefly on the lines of a Latin poem by Venantius Fortunatus. These lines are :

"Romanusque lyra plaudat, tibi Barbarus harpa,  
Græcus achilliaca, chrotta Brittanna canat,"

which translated reads :

"Let the Roman applaud thee with the lyre, the  
Barbarian with the harp, the Greek with the cithara;  
let the British crwth sing."

Carl Engel was of the opinion that the so-called Welsh crwth was not a bowed instrument at all, but simply one closely resembling the small Greek lyre, the strings of which were plucked by the fingers of the player, and that it was not until later that the Welsh players were acquainted with the use of the bow.\*

Only conjectures can be formed as to its prehis-

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\* "Researches into the Early History of the Violin Family," by Carl Engel.

PLATE I.

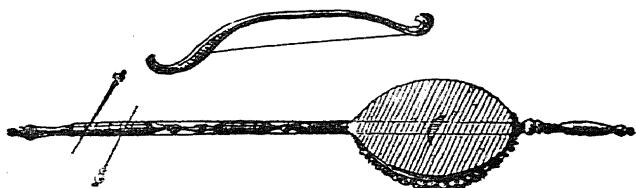


FIG. 1. THE RAVANASTRON.

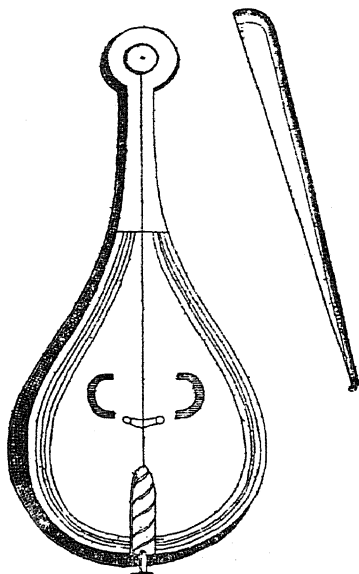


FIG. 2. THE REBEK FROM MANUSCRIPT  
OF ABBÉ GERBERT.

PLATE I.

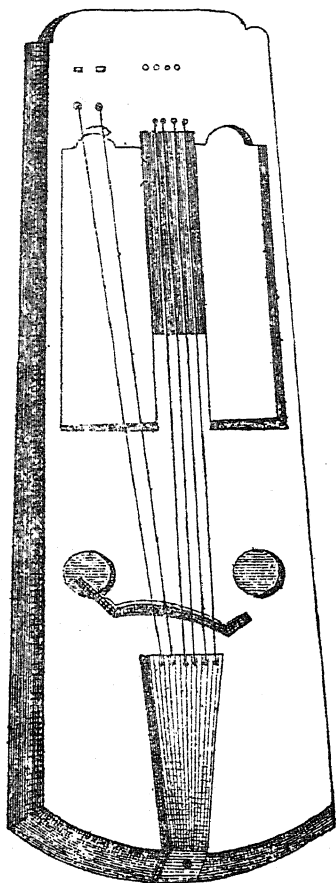


FIG. 3. CROUTH WITH SIX STRINGS.

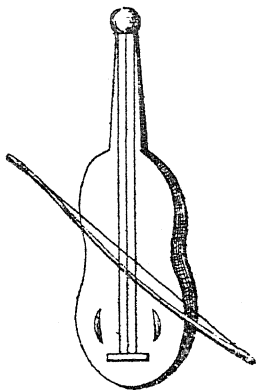


FIG. 4. VIOL  
(13TH CENTURY).



toric rise in the British Isles. Stronger and more reliable proof can be shown that it is traceable to the rebab or rebek of the Arabs (Plate I, Fig. 3).

### **Violin the Outcome of Gradual Evolution.**

It must be remembered that our present-day violin is the outcome of a gradual process of evolution, not an invention, but a growth in which many ancient instruments have taken part, each bequeathing some point for guidance to the improved form that followed. As H. R. Haweis states: "The rebek gave its rounded form pierced in the belly with two sound-holes, the bridge, tail-piece, screw-box, doubtless a sound-post, and that odd crook of a violin bow often seen in the hands of stone angels in cathedrals of the fourteenth century.

"The growth gives the all-important hint of the two vibrating boards joined by ribs; whilst from the rotti, or guitar tribe, comes the lower end, the upper end comes from the rebek—the elongated neck separate from the body, the frets, which for one hundred and fifty years delayed the advent of the violin, and the two concave side-curves so needful for the manipulation of the bow."\*

### **The Viol.**

The viol found its way into England at an early period, for we find it mentioned by old writers as the rebec. Chaucer, in his "Tales," speaks of the

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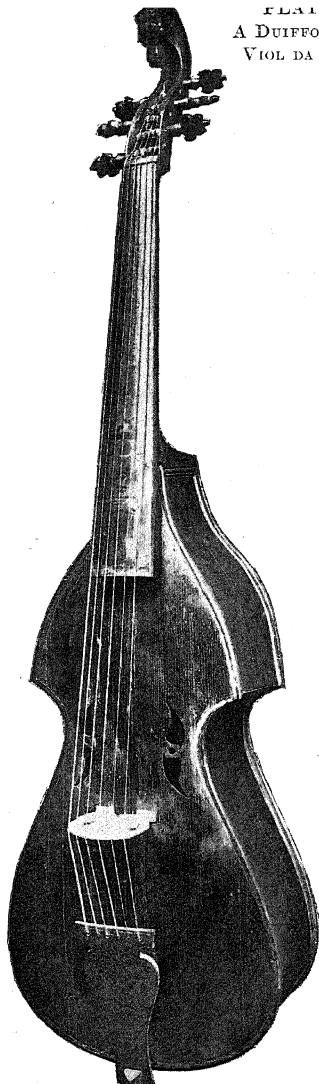
\* "My Musical Life," p. 237.

"fidel," and "a smale ribible" (a small rebec). The fiddle, or rebec, of those days was a small viol with three strings. There was also in Wales the *crwth*, an instrument very similar to the rebec; hence we get the old English word *crowder*, or *fiddler*. The lute and the viol continued in use in Europe till the early part of the seventeenth century. It is now easy to trace the final development from the viols to the violin. The viols usually had flat backs and rounded bellies, but they varied in shape. They were of three kinds—the treble-viol, the tenor-viol, and the bass-viol. The violin was evolved from the treble-viol, by lessening its size, reducing the number of its strings, and taking away the frets from the fingerboard. The viola or tenor of to-day retains the size of the old tenor-viol; and the old bass-viol has been converted into the violoncello. Our double-bass is the only viol which retains the ancient flat back of its ancestor viols (Plate I, Fig. 4).

### **Gaspar Duiffoprugcar.**

It is very doubtful who can claim the honour of having produced the first true violin. Perhaps among the many, we can turn to one Gaspar Duiffoprugcar, a native of Tyrol, during the years 1500 and 1560. He was a maker of lutes and viols of excellent workmanship, some of which are still in existence. He was born about 1469. In 1515 he went to Paris as instrument maker to the royal chapel; after a short residence in this city he

PLATE II.  
A DUFFOPRUGGAR  
VIOL DA GAMBA.





removed to Lyons, where he died. Although renowned as a maker of lutes, he has been considered the creator of the modern violin form, the evidence in support of this assertion being the finding in his workshop of six violins which show undoubted evidence of his manufacture. Although crude and unproportioned in form, they were quite distinct from the viols of the fifteenth and sixteenth centuries; the well-defined curves, corners, scrolls and *//* holes placed them quite apart from the lutes. The backs were inlaid and adorned with paintings. They were labelled—one being dated 1510; another 1511; one now at Bologna, 1515 (where Duiffoprugcar worked for some years), a fourth 1517; and a fifth with a carved head instead of the scroll, bearing the label, "Gaspar Duiffoprugcar Buononiensis, anno 1515" (Plate II).

### The Italian Makers.

The Brescian makers of the violin were the earliest makers of whom any record exists, consequently they hold an important position in the history of violin making. Some historians give Gaspar da Salo the credit of being the first maker of our present shaped instrument (Plate III). He worked in Brescia during the sixteenth century. Maggini was another important Brescian maker. Andreas Amati, the first Cremonese maker, died at the beginning of the seventeenth century. His sons, Antonius and Hieronymus, and grandson, Nicolas, worked also at

Cremona. Antonius Stradivarius, the greatest maker of the Italian school was a pupil of Nicolas Amati, and lived from 1644 to 1737. His most celebrated pupil was Carlo Bergonzi, who died ten years later. Other important makers at this period were Joseph Guarnerius del Jesu, Domenico Montagnana, and Gennaro Gagliano. These makers brought the violin to its present standard, and their work has been the model for all their successors.

### **No Improvement in Construction.**

For about three hundred years no improvement in the shape of the violin has been effected. Although various other forms have been tried, including special internal constructions and the substitution for wood of porcelain and metal, etc., the changes have been all to no purpose. From time to time we are startled with the statement "that the secret of the Strad violin tone has been discovered," only to find on investigation that the supposed solution is worthless or, at the best, unsatisfactory.

### **Important Points in Construction.**

For the production of fine tone in violins three important things are essential; the careful selection of first-class well-matured wood; expert construction in every detail; and the application of the most suitable varnish.

A violin is a mathematically constructed sound-box. The strings alone give a weak sound, but the

sound is reinforced by the powers of the sound-box. The latter not only strengthens the sound-vibrations, but gives them a special quality which plays a most important part in the tone of the instrument. Scientists have experimented by making violins with flat backs and fronts, in oblong box form, in square box form, with shallow depth between back and front, and with deep and wide distances from the front to the back; but all such experiments have failed. The present shape is the result of the experience of centuries, and is likely to hold its own against all would-be improvers. Tests have been carried out with first-class modern instruments and a genuine and fine conditioned Stradivarius. These were played behind a screen, and a number of capable players and connoisseurs were invited to judge the tone; with the result that they were so confounded as to state that no difference could be detected. How such could be the case we cannot imagine, especially as all new instruments possess a certain quality of tone quite distinct from that of good old seasoned violins. It is, as H. R. Haweis remarks: "As well tell a man who has been tasting port and sherry alternately several times with his eyes shut, that there is no difference between these wines because his sense of taste is not proof against a certain test invented to confuse him. The ear is as delicate and as easily perturbed as the palate. But the real answer to such modern rivals of Stradivarius is that no one

will play upon them who can afford or get the genuine article."

### **Age and Make.**

Although age is the great improving factor in a violin, it must be remembered that age will never make a bad instrument into a good one. Using a good violin will certainly keep it in fine condition, but using all day long will not improve a cheap or faulty one. In pointing out the important factors in violin construction, mention has been made of the wood. This material is the prime agent in the production of tone, which depends upon two qualities, the thickness and density of the various woods, and the direction and shape of the curving.

### **The Wood.**

The front or belly of the violin, as it is technically spoken of, is made of softer wood than the back, and is usually of pine. Swiss pine is generally considered to be the best. It is taken from the south side of the tree. Pine is chosen owing to its soft and elastic properties; deal also contains the same satisfactory essentials. In the majority of cases the belly is made in two pieces, although where the grain is exceptionally uniform it is allowable to make it of one only. Another important matter is the thickness of the wood. If the belly be either too thin or too thick, the resonance will be unsatisfactory. This requirement as to thickness also applies to the wood of



the back. It has been proved that a violin made from wood which has been artificially prepared, or with the wood of the belly left too thin, cannot produce a good tone, and that what tone it does produce quickly deteriorates. The thickness of the wood should not be uniform, but should vary in different parts of the surface; also the back should be thicker than the belly. The skill of the violin maker here steps in, and great judgment and knowledge are required to obtain these varying proportions in the thickness.

787.1 667 (2) For the back of the instrument a hard, sonorous wood, such as sycamore or maple, is used. These woods containing less sap, and as a result fewer hollow cells when dry, they vibrate more slowly than pine or deal, of which the belly or front plate of the violin may be made. (The back and belly of a violin are known as upper and lower plates.) The back can also, like the belly, be made in one or two pieces; for a back in two pieces a thick wedge-shaped piece of maple is taken and cut in two longitudinally, so that the two halves can be opened out like a book. The thickest edges are then well glued together, the result being that the grain on both sides of the back is identical, and this is of value in securing symmetry of appearance (Plate IV, Figs. 12 and 13).

The upper and lower plates are joined by thin pieces of maple or sycamore, bent by heated irons to the correct shape, and supported by six blocks with linings, thus securing the back and belly to the

sides. These "ribs" form the sides of the resonance chamber, and the blocks serve a further purpose by providing broad flat surfaces for the upper and lower plates to be glued to, while the top and bottom blocks serve to support the neck and tail-piece respectively. The linings are narrow strips of pine placed in the angles formed by the ribs, back and belly (Plate IV, Fig. 8).

To return to the question of wood: the shaping and working of it, both for the upper and lower plates, must be done by recognised rules, which have been evolved by long experience. The capacity of the sounding box is practically the same in all good fiddles; but there must be a due relation between its size and the thickness of the wood. Should the air-content be too large, notes of low pitch are rendered dull and weak, while the high notes have a piercing and shrill sound. If the capacity is too small, the deep notes are hard and the upper dull.

The requisite thickness of back and belly are of the utmost importance, and a small alteration in this matter greatly affects the tone of the instrument, the resonance being interfered with. If the wood is too thick, the tone is poor, without due carrying power; if too thin, a hollow and "tubby" tone results. It has been stated that the back has an important function to fulfil in offering a certain resistance to the air-waves caused in the body of contained air by the vibrations of the belly. If, however, the resist-

ance is too great, the vibrating power of the back is destroyed altogether.

It has been found that some Stradivarius violins give out certain notes from the wood; but too much importance should not be attached to this fact, as will be seen from what H. R. Haweis says (in his "Music and Morals"): "Some believe that Stradivarius did not determine at all scientifically the various densities of his woods, or intentionally place a whole tone between the back and the belly. And for this reason—that had he once discovered these laws, neither he nor his pupils would have deviated from them as he did. For out of the immense number of his instruments only the finest of his best period obey the test of these natural laws of acoustics." But nowadays all good makers manufacture their instruments on careful acoustic lines.

### The Curves.

The most important curves of the violin are those extending from side to side, and from top to bottom, both on the belly and the back. They play an important part in tone production. Again, we learn from acoustics that this curve is the only one which is found to conduct perfectly the vibratory sound waves. Set a string in vibration, and we see the same kind of curve which we have in the good violin. The greatest exactness is requisite in these curves; if the arching of the belly be too high or too small, the tone will be of a *nasal* or *muffled* sound.

## **The Sound-holes.**

Cut in the belly are the familiar *//* holes or sound-holes, and their position and shape are also points for careful consideration. Modern makers have made such progress in the shaping and position of the sound-holes that they have succeeded in reaching perfection. Patterns of the old masters have been copied with the utmost exactitude. Innovations have been attempted by Savart and Chanut, but the present shape of the *//* holes has retained its familiar aspect for over three hundred years. The *//* holes influence the entire system of vibrations of the belly, and thus govern the vibrations of the whole instrument. A deviation from this size and shape affects the tone. If the holes are too large, or set too close to one another, the tone of the instrument becomes harsh and shrill, and when too small, or set too far apart, it is of a dull and "woolly" character. As with bridges, immense numbers of sound-holes, of all shapes and sizes, have been tried, but the familiar shape is not likely to be superseded. The shape and proportions of the *//* holes depend on the dimensions of the instrument, and they must be cut in strict relation to these conditions.

## **Patterns.**

Attention must now be turned to the model or shape. Patterns can be obtained of all models, and it is from these that the violin is made. Care should, however, be taken that a pattern is genuine. Many



Violin Fingerboard.



1.

Neck Nut.



2.

Tail Nut.



3.

Violin Bass Bar.



6.

Violin Linings.



8.

Violin Neck.



7.

Violin Sound Post Setter.



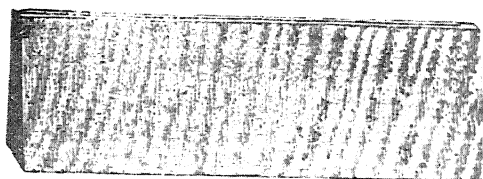
5.

Violin End Pin.

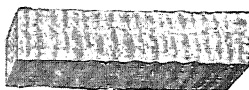


4.

Violin Back.



Violin Neck Graft.



9.

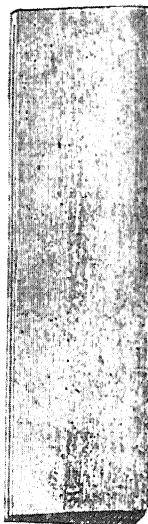
Violin Breast. Violin Ribs



10.



11.



10.

of the first-class makers copy direct from a genuine instrument, either by taking an outline of a violin, by direct tracing with a fine point when the back or belly of the instrument to be copied has been removed, or by means of a thin piece of board with a guitar-shaped piece of wood, rather smaller than the outline of the violin, cut out of it to receive the bulge of the back when the instrument is laid upon it. This will bring the outline of the violin close to the piece of wood, and the model can then be traced. (Plate IV, Fig. 10.)

### **Bagatella's Mathematical Outline.**

In a very interesting work of 1782, by Antonio Bagatella,\* the author gives a clever mathematical method of making an outline for the model. We give it from Abele's work on the "Violin," translated by J. Broadhouse:

"Draw a line of the full length the violin is intended to be, and divide it into seventy-two equal parts. This must be done with the utmost nicety, as it is the groundwork of the whole, upon which everything else depends. Seven other lines must be drawn at right angles to this line, through the points 14, 20, 25, 33, 43, 48, 57.

"Take the compasses, put one point at X, open the other to the width of nine parts, and describe the two arcs A B; then take point 24 as a centre, open the compasses to X, and describe the two arcs

---

\* "Regole per la costruzione di Violini, Violi, Violoncelli, e Violoni" (Padua).

A X B. Then upon the line going through point 14, measure off on each side a length of two parts at C C, and with each of these points C C as a centre, describe the two arcs A D and B D, stopping at the line going through point 20. This gives the outline of the upper part of the instrument.

"This being done, draw on the line going through point 33 two points E E, which must be  $10\frac{1}{2}$  parts from point 33, and beyond these two other points F F, which are the centres of the two arcs H E G: and in this manner the outline of the middle part is obtained.

"Then at the point 72, and with a diameter of nine parts, describe the small arc I K; then on the line going through point 57 take two points L L, each three parts from point 57, and from these three other parts to M M, and with these latter centres, describe at the distance M K, the two arcs N K and N J respectively; then take L as a centre, and at distance L N, describe the arc N O. Finally, take point 72 as a centre and draw the arc K Y J. The model is then complete." (Plate V.)

### **An Incomplete Model.**

Mr. Broadhouse, commenting on this diagram, states that he has not seen the original work of Bagatella's, but that in his opinion this diagram is very incomplete, as no instructions are given as to how to determine the distance of the centre F from the point E in the circumference of which the arc



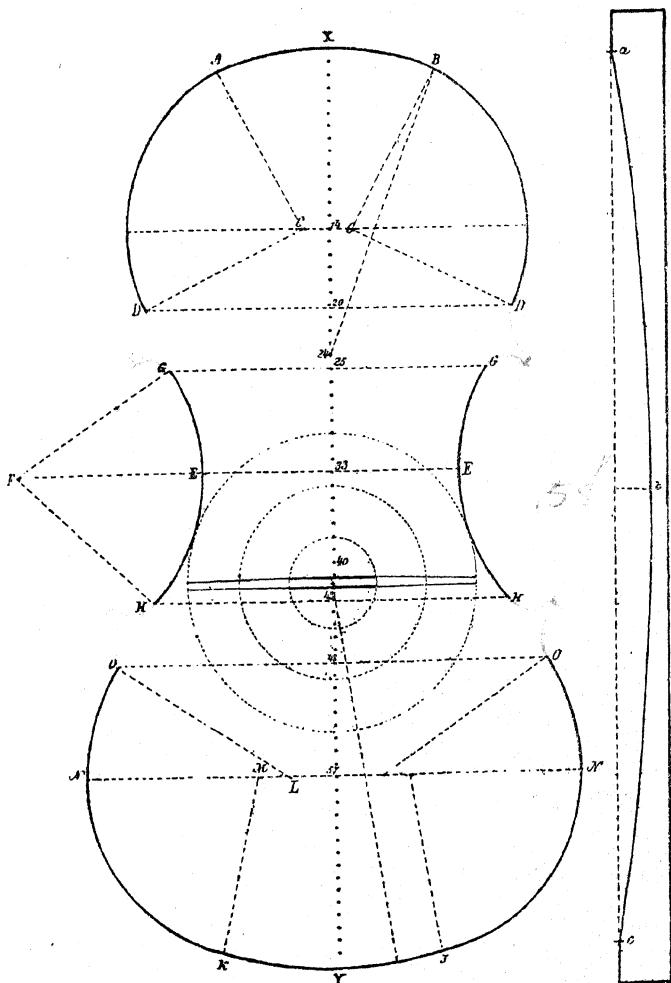


PLATE V.  
BAGATELLA'S MODELS FOR BACK AND BELLY.

H E G is a part; nor is anything said about that arc stopping at the limit of the lines going through points 25 and 43 respectively.

### **The Belly and Back.**

Working from an old master's pattern, the next part of the process is the making of the outer curves of the belly and back; a most delicate and exacting operation. The wood is first roughly scraped out with a violin maker's gouge. The curves or arching done, the final finish is proceeded with. This is completed with oval-toothed planes of various sizes and shapes (Plate VI, Figs. 21, 22).

During this process continual comparison has to be made with the model. When this stage of the work is finished, a groove is made round the outline one-eighth of an inch from the edge, and the inside of this groove is graduated into the curve of the back or belly, as the case may be. The outer side of the groove goes sharply up to the edge, and this gives the low level for the purfling, the edge rising again to the outline of the instrument. After the outer surfaces of the back and belly have been satisfactorily completed, the inner surfaces have to undergo a somewhat similar operation. A line is first drawn round these inner plates about one-third of an inch from the edge; beyond this mark no planing or cutting must be made. The outline of the interior must be marked across the corners, so that a flat surface is left to which the sides and blocks

are fastened. In this process of hollowing out the back and belly lies one of the severest tests of the art of the violin maker, and the thickness to which the wood has to be graduated requires skill, knowledge and experience. The rough measurements can perhaps be stated as follows for the back: edges about one-ninth of an inch thick; at the centre of the upper ribs or bouts about one-seventh of an inch thick, at the centre, between the inner ribs, one-sixth of an inch thick; and at the centre, between the lower ribs, a little less than at the centre of the upper ribs. Of course these measurements gradually merge into one another, and are not abrupt. The next stage is to round the edges of the back on the under side. The ribs are then glued on, being supported at the four corners, top and bottom, by small blocks of pine. These blocks also serve a further purpose in giving broad flat surfaces for the back and belly to be glued to, and the top and bottom blocks serve to support the neck and tail-piece. The ribs at their junction with the back and belly are still further strengthened by what are termed linings. Of these there are twelve. They consist of narrow strips of pine placed in the angles between the ribs and back and between the ribs and belly. These linings and blocks may be fitly called the skeleton of the violin. The ribs of the violin are chiefly made of sycamore, and are bent to the correct shape by the use of a heated iron; they are about one-sixteenth of an inch in thickness (Plate VI, Fig. 28).

Before proceeding with the fixing of the belly, three matters of great importance call for attention. First, the correct thickness and gauging of the belly, secondly, the cutting of the sound-holes or // holes, and thirdly, the fixing of the bass-bar.

The scooping out process is done on the inner surface until a uniform thickness is reached, then the sound-holes are cut out with a fine knife according to the model from which the violin is copied, after which the thickness of the belly is finished off so that beneath the bridge there is a thickness of a little over one-eighth of an inch, this graduating off to about one-eighteenth of an inch to the edge. A little more thickness must be left where the sound-post will touch.

### **Fixing the Bass-Bar.**

The bass-bar is a slip of pine about  $10\frac{1}{2}$  inches in length, three-sixteenths of an inch thick, and one inch broad; it is glued inside the belly, as nearly as possible in a line with the fourth string. Its use is to facilitate the vibrations of the belly and give increased sonority to the lower notes. It also acts as a support to the belly against the pressure of the strings. At the present day it is usually made longer and deeper near the centre, so as to withstand more perfectly the greater pressure which results from the higher pitch in vogue now. For this reason the removal of the bass-bar from old instruments has become necessary. A new one of greater

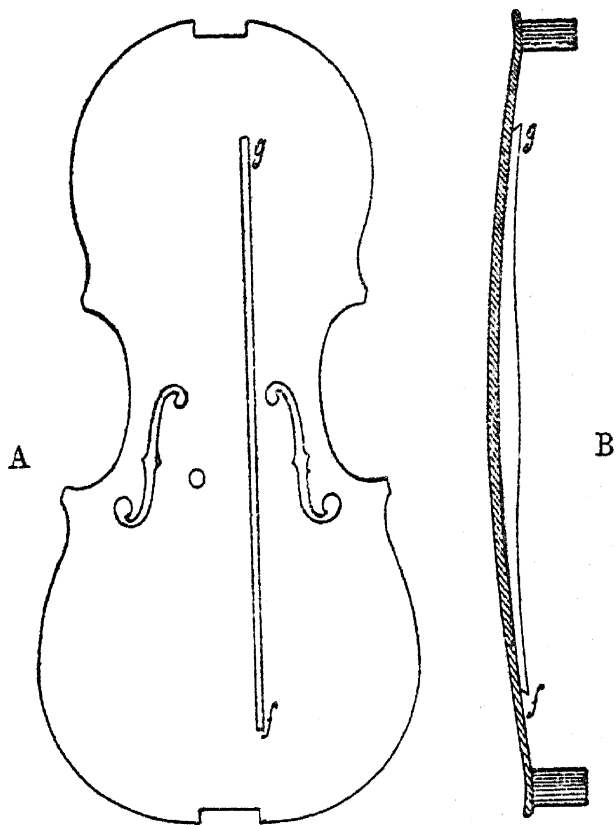


PLATE VII.  
FIGS. A AND B. FIXING BASS BAR.

strength must be inserted for present-day use. Of course the correctness of the construction of the old violin makers is not affected by the alteration made to meet the requirements of the higher pitch of later times—the old measurements being adapted to the lower pitch of the period. Formerly the bass-bar was not only shorter and slighter, but was also inserted by some makers in various positions, perfectly straight, slanting, etc. The pressure upon the belly of the instrument from the strings and thus to the bass-bar is estimated at about sixty-four pounds, therefore the greatest care must be taken in its adjustment. It is shaped to the interior curve of the belly, and so fixed that its inner edge comes three-quarters of an inch from the centre of the belly at the top, four-fifths of an inch from the centre between the inner ribs, and five-sixths of an inch from the centre in the lower ribs. The ends are shaped off, and it should be about two-fifths of an inch deep in the centre, sloping off to the under surface of the belly (Plate VII, Figs. A and B).

### **The Weight of the Bass-Bar.**

The bass-bar serves several purposes besides acting as a support to the belly of the violin and increasing the power of the lower notes. The weight of the bass-bar is equivalent to the amount of wood removed to make the sound-holes; thus compensating for such loss. A belly was once experimentally fitted with the sound-holes uncut and having

no bass-bar; when sounded it gave the note C. On cutting the sound-holes the pitch rose to D. A very heavy bass-bar was then fitted, bringing the note down to B; but when this was replaced by a normal bar, the original note C was produced. From this it was seen that the added wood exactly balanced that removed. Of course this would only apply to a perfectly proportioned belly. From these results it would appear that to improve the tone of a weak-bellied violin, a heavy bass-bar should be fitted. The weight of the bar in respect to its size is a matter of great importance, needing judgment and experience; an increase of weight will sometimes add sonority to the lower notes.

### **The Position of the Bass-Bar.**

Its position does not coincide with the fibres of the belly; the object aimed at being to support a greater number of fibres than would otherwise be the case. This also helps to brighten the tone, although it imparts a certain amount of hardness. A hard-toned instrument can sometimes be improved by adjusting the bar exactly in a line with the belly fibres. The length of the bar should always be carefully considered, because if too long, it will affect the free vibration of the belly, the resultant tone being unresponsive. H. Saint-George states that: "With some weak old fiddles that have sunk down on the bass side through inadequate barring, a considerable improvement may be effected by *springing*

the bar in. That is to say, that instead of shaping the bar until it exactly fits the belly throughout the whole of the contact surface, it is cut to a somewhat more pronounced curve. Then, when glued and cramped finally into position, the belly is brought up approximately to its original arching.”\*

These particulars are full of interest to players, but the best makers have no fixed rules for adjusting the bass-bar to the particular model of the violin.

### Purfling.

After the adjustment of the bass-bar the interior of the instrument should be cleansed from dirt or dropped glue, and the belly attached to the ribs in the same manner as the back. The violin is now *purfled*. The purfling is an ornamental and useful inlay round the back and belly. It consists of three slender strips of willow, two of them being dyed black. Ebony is used for the black by some makers, and formerly some Dutch and Italian makers used whalebone. To fix the purfling a groove one-sixteenth of an inch broad, and one-twelfth of an inch deep, at an even distance of five-thirty-seconds of an inch from the edge of the back and belly is made by the use of a purfling gauge, similar to a carpenter's gauge, but on a miniature scale (Plate VI, Fig. 8). When the groove has been made the three pieces of wood, the white strip being in the centre, are inserted in it, and the

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\* “Fiddles, their Selection, Preservation and Betterment” (H. Saint-George).



edges bevelled off so as to fit exactly. They are then glued in and smoothed to give a neat finish. As the purfling has no effect on the tone of the instrument it is supposed by many to be merely ornamental. This is not the case. It serves a very useful purpose, namely, to bind the fibres of the back and belly together to prevent splitting. The belly, by reason of its softness and straight grain, is more liable to such accidents, and this is no doubt the reason why some of the early makers purfled the belly only. Purfling is let in all round the outline of the violin except the lower part of the belly, where a small space is left for the insertion of a piece of ebony which projects and is slightly raised from the level surface of the violin edge. This is called the saddle or tail-rest, and supports the tail gut to which the tailpiece is fastened. In the centre of the lower rib of the belly, a hole is drilled into the wood block, and into this a small ebony or rosewood peg or stud is fitted. On to this peg the tailpiece is fastened.

### **Carving Neck and Scroll.**

The body or sound-box of the instrument being completed, the next stage is the carving of the neck and scroll for joining to the body. This is cut from one piece of wood, and the scroll carved. Maple is the wood usually chosen. The head of the instrument is commonly known as the "scroll" owing to its curved appearance. Many old makers substituted a carved animal's head in place of the scroll.

(Stainer frequently substituted a lion's head.) Carving a scroll shows the maker's skill and artistic ability. The difficulty lays in determining the exact proportions of one side to the other. This is done by the aid of three thin metal patterns, the first gives the front of the peg-box, the second the back of the scroll, and the third the scroll itself. When the head or scroll is carved, a cavity of oblong shape, known as the peg-box, is then cut. The next operation is to cut the neck out from the block of wood; it is first carefully traced, then cut and gracefully carved or rounded, a broad part termed the shoulder being left at one end and so shaped that it will fit exactly into a space cut through the sides, where they join at the top of the violin into the top block (Fig. 7, Plate IV). It is then firmly glued in and the shoulder carefully shaped to correspond with a semi-circular piece of wood, left projecting for this purpose when the top part of the back of the instrument was shaped out. Holes are now drilled into the peg-box to receive the pegs; after which process the violin is cleaned with very fine sandpaper and we have the instrument *in the white*, as it is termed.

### Varnishing.

The final stage in construction—the varnishing—has now to be carried out. This is not merely an ornamental process; it also serves as a protection to the wood. A good varnish gives permanence to the quality of the instrument's tone. Varnishes are many

and varied, and with regard to those used by the great makers of Cremona, there is still much difference of opinion.

Before varnishing, the violin should be carefully cleaned of all dirt. It should then be stained over the body, shoulder and scroll, leaving only the neck bare. The stain used will of course be decided by the colour of instrument desired; gamboge if yellow, or dragon blood if red, dissolved in alcohol. The application of the stain is done speedily and in broad sweeps of the brush, care being taken that the brush never goes over the same point twice, or a blotchy and patched appearance is the result. When this stain is quite dry, the varnish is applied thinly and as evenly as possible. The best method for holding the violin, when varnishing, is by its bare neck and a stick thrust into the hole in the bottom block, which later takes the tail-pin. If good thin oil varnish is used about eight to twelve coats are sufficient and between each coat care must be taken to see that it is hard and dry before the next is given, also that any specks of dirt or flies, etc., are removed. If any marks or streaks be found upon the surface they are rubbed down with very fine sandpaper. After about the sixth or seventh coat of varnish the bevelled edge of the scroll and the edges of the sides where the outer and lower bouts meet the centre bouts, have the varnish scraped off down to the wood, and a slightly marked line of black is painted on to the wood. Then the other coats of varnish are

added until the whole instrument is of the depth of colour preferred.

Broadly speaking, there are two varieties of varnish: oil varnish and spirit varnish, so termed from the materials of which they are made. In most cases it is believed that the old Italian makers employed oil varnishes, but some authorities state that an oil varnish was put on the wood first and a spirit varnish over that. Oil varnish is certainly the better to use, being more elastic, and not so liable to chipping and scratching. Oil varnish is almost invariably used for better class instruments. The obstacles to its use on the cheaper instruments are the difficulty of getting a sufficient depth of colour, and the length of time required for drying. Spirit varnish takes up almost any quantity of colour, and dries rapidly. The colouring ingredients are resinous gums. Controversy has been carried on for years regarding the constituents and properties of varnish used on the old instruments as well as the right materials to use on modern ones. Concerning the "amber varnish," said to have been used by Stradivarius, Guarnerius, etc., experts differ, and the various opinions of these authorities may be said briefly to be: first, that it was undoubtedly an oil varnish containing the fossil gum called amber; secondly, that the making of such a varnish is a scientific impossibility; and thirdly, that the name "amber varnish" simply refers to the colour of the varnish, and not its constituents. A striking work on the subject is one en-

titled "The Varnishes of the Italian Violin Makers of the Sixteenth, Seventeenth and Eighteenth Centuries, and their Influence on Tone," by G. Fry. Its author very convincingly formulates the theory that the colours of the varnishes of the Italian makers, from Gaspar da Salo to Stradivarius, were not produced by colouring matters at all. The gist of his argument may be gathered from the following extracts from the preface: "Experts who have had constant opportunities for studying the varnish on old Italian instruments have, without exception, accepted the theory that it is an oil varnish coloured to suit individual taste, although in no case have their own descriptions of its appearance been found to support this conclusion. . . . The explanation of the mystery which is now offered is that the old violin makers used as the constituents of their varnishes the natural products of trees (conifers) and plants (flax) growing in their immediate vicinity, abundant and easily procured; that they were simply varnishes composed of resin and turpentine, or of these two substances and linseed oil; that the various apparent colours were due to optical effects naturally arising from variations in the details of the preparation of the varnishes; that the differences in their physical qualities arose from the same causes." In further proof that no colouring matters were used, Mr. Fry states that he himself has produced varnishes of all shades with these ingredients.

### **Tone and Varnish.**

The secret of fine tone has been attributed to the varnish by many, but we should be cautious in ascribing so great an influence to this constituent. Varnish preserves and after a time to a certain extent improves the tone, though not so much as some wish us to believe.

One maker has boldly asserted that amber oil varnish does not exist, but that it is the spirit of amber and that oil varnish is an imagination of the sellers. He contends that to coat an instrument with amber varnish would be like encasing it in a coat of mail, the quality of tone thus produced being harsh and unsympathetic. The varnishes used by the old masters, he further informs us, were probably soft resins, such as mastic, sandarach, benzoin and perhaps soft copal or dammar. Though varnish *affects* the tone, the tone itself comes from the wood, and from the correct acoustic build of the model, not from the varnish. A violin is most decidedly improved by a good oil varnish, although upon first application and for some time after, the tone is muffled. Later it imparts a mellowness and ringing brilliancy; whereas spirit varnish unfortunately results in a harsh, wiry tone. It is easy to spoil the tone of a good violin by putting on hard varnish, either oil or spirit. In many of the old Italian fiddles, though apparently bare of varnish, the varnish really has remained, having been absorbed into the wood. It is imperative that a good oil varnish

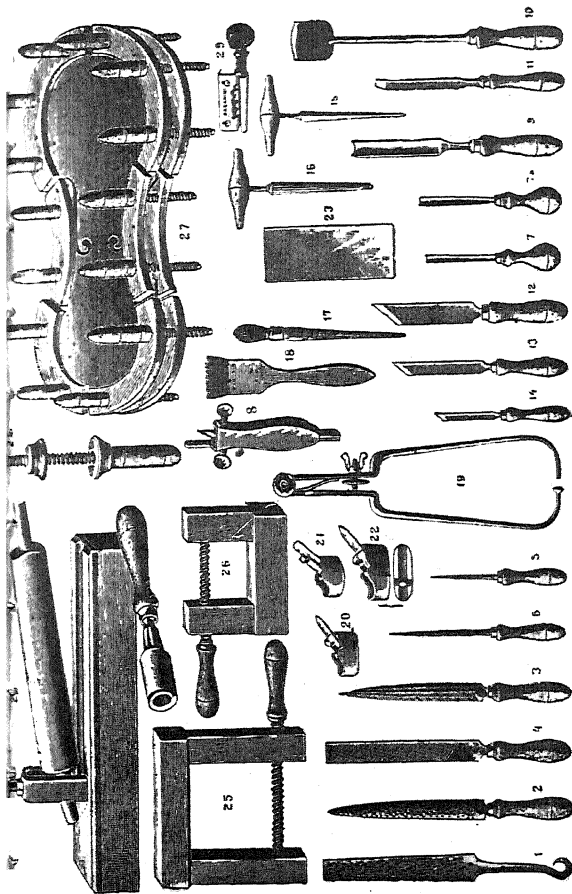


PLATE VI. A VIOLIN MAKER'S TOOLS.

Fig. 1.—Rasp, flat. 2.—Rasp, curved. 3.—File, curved. 4.—File, flat. 5.—File, round. 6.—File, larger, round. 7.—hole borer. 7a.—hole borer, larger. 8.—Parfing tool. 9.—Chisel. 10.—Chisel. 11.—Chisel. 12.—Knife, broad. 13.—Knife, medium. 14.—Knife, small. 15.—Peg-hole cutter. 16.—Peg-hole rimer, fluted. 17.—Varnish brush, round. 18.—Varnish brush, flat. 19. Callipers. 20.—Plane, flat. 21.—Plane, curved. 22.—Plane, for sound-post. 23.—Scraper. 24.—Wood clamp, for requiring. 25.—Wood clamp, for gluing on bass bars. 26.—Wood clamp, for gluing on necks and finger-boards. 27.—Wood clamp, for gluing on backs and fronts. 27a.—Wood clamp. 28.—Bending iron for ribs. 29.—Violin peg cutter.





should contain amber; its use for varnish can be traced back for over two hundred years, and we have therefore every reason to believe it was used by all the famous old makers.

### **Sound-post, etc.**

The next matter to receive attention is the fitting of finger-board and nut, which are made of ebony, the nut raising the strings off the finger-board and being placed just in front of the peg-box; after this the pegs, made either of rosewood or ebony are fitted, then strings, bridge, and lastly, but of great importance, the sound-post. This consists of a small cylindrical piece of pinewood of a fine grain and about seven-thirty-seconds of an inch in diameter, and before being fitted is in length two and three-eighths inches. The sound-post is placed in an upright position inside the body of the violin by the sound-holes, and is so fixed as to form a support to the belly. Its other function is to act as a conductor of sound from the belly to the back, and thus blend the vibrations. Its two extremities must be in close contact with the inner surfaces of the back and the belly, and it should be so placed as to be just behind the right foot of the bridge. If placed directly under the foot of the bridge, the tone would be seriously impaired; but when just behind, a portion of the energy of the vibrations is directly imparted to the belly, and thus not conducted immediately to the

PLATE VIII.

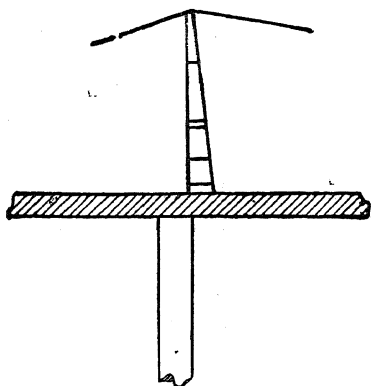


FIG. C.

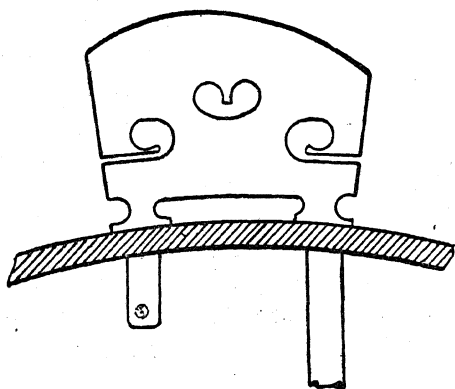


FIG. D.

POSITION OF THE SOUND-POST.

back. On no account should it be glued, but lightly placed in position so that when the bridge and strings are on, it cannot fall. If placed too tightly the tone is likely to be pinched and nasal. The process is somewhat troublesome (Plate VIII, Figs. C and D).

### **The Sound-post, its Position.**

Rules as to the exact position of the sound-post are dogmatically given by books on the subject, but such rules can only be applied in a general way. The correct position, like that of the bridge, can only be ascertained by experiment and from the build of the instrument. A general guide is that it should stand immediately behind the right foot of the bridge. In high breasted violins it should be placed nearer the bridge than in flatter models; low built violins require the sound-post to be further away from the bridge. The best wood for a sound-post is very old pine with a wide grain. The grain may run either parallel with the breast or exactly across it. If the tone of a violin is too soft, it can be made more brilliant by having a sound-post of very hard pine; on the other hand, should the tone be hard, the sound-post must be of very soft pine. Inequality of tone can be improved by altering the position of the sound-post towards the weaker strings, but such alteration should be very slight.

### Adjusting the Sound-post.

To adjust the sound-post a sound-post setter should be used (Plate IV, Fig. 5). It is a curve-shaped piece of steel, one end is sharpened to a point and the other hook shaped; the sharp end of this tool is pressed into the sound-post near the top, and then through the right / hole to its correct position, as nearly as can be decided. The withdrawing of the setter from the sound-post fixes the post temporarily and it can then, by the aid of the hook, at the other end of the setter, be shifted and definitely pulled into position. The sound-post should never be fixed or wedged tightly, as the pressure of the strings will be quite sufficient to hold it firmly. Care must be taken to avoid injuring the under surface of the breast. Force is quite unnecessary; the end of the sound-post touching the breast of the violin should be drawn into position first, then the lower end can be gently pulled into its place, only so tight that it just stands easily. The two ends of the sound-post must fit close to the breast and back.

The making of a sound-post is always a trying matter. Many makers use a set of trial posts of different sizes; these are set in the violin until one is found correct in length, then from this measurement the suitable post can be cut, and the most satisfactory grain of wood chosen. The top and bottom should fit exactly to the belly and back, the strings being slackened before insertion of the post.

To see that it is inserted perfectly upright the

button at the base of the instrument should be removed and the post viewed through the vacant hole to see that it is correct.

### **Marking the Position of the Sound-post.**

When the sound-post is fixed in its most suitable position, the place where it stands should be marked by drawing a pencil round the end of the post touching the back of the violin. Such a precaution makes the readjustment, at any time, a simple matter.

### **Patent Sound-posts.**

Like all other fittings of the violin specially prepared sound-posts are advertised by their inventors. If these wonderful fittings really had the powers ascribed to them in the advertisements, Stradivarius tone qualities would be imparted to all violins. One inventor has introduced a hollow sound-post which is said to eliminate all harshness and give a round, full tone.

In experimenting with one the effect chiefly noticeable on the particular violin used was that the tone was softened and mellowed, but no greater power was forthcoming and the "mellowness" appeared to be somewhat nasal. A good solid pine sound-post would, we are inclined to think, be more satisfactory in conveying vibrations and giving power to the tone.

### **The Bridge.**

It is quite common to find a fine toned fiddle spoilt and sounding harsh, hard or thin, as the result of a badly fitting or unsuitable bridge. Some violin makers and dealers fail to give the time necessary in selecting the right bridge for the right violin, since twenty may have to be tried before the right one is found. Apart from the characteristic quality of every violin, it is most important to select the most suitable bridge. The effect which the bridge has on the tone can be understood when it is seen that it forms the principal agent through which the vibrations of the strings pass to the table or belly, by way of the bass-bar, and to the back by way of the sound-post. Many forms of the bridge have been used—among them a four-footed one (Plate XI, Fig. 11). Unfortunately tests do not quite justify the praises lavished on them by the inventor. The real value of a bridge is in the minute care with which the feet are fitted to the belly (Plate VIII, Fig. D). The medium of the recognised shape with its two perfectly fitting feet as designed by Stradivarius has not up to the present been bettered. Well-seasoned Aubert bridges are among the best best makes, and several high-class makers of to-day have bridges of their own, manufactured from extra fine old and variously grained wood, which are sometimes equal to the finest Auberts.

PLATE IX.  
EVOLUTION OF THE BRIDGE.

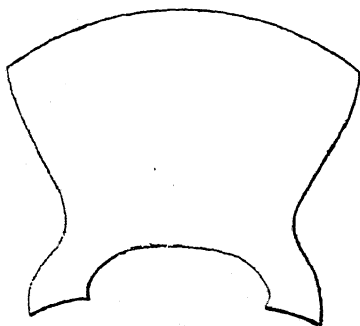


FIG. 1. BRIDGE OF A VIOL WITH SEVEN STRINGS, THE BODY OF WHICH IS NOT CUT OUT EXCEPT AT THE TWO SIDES.

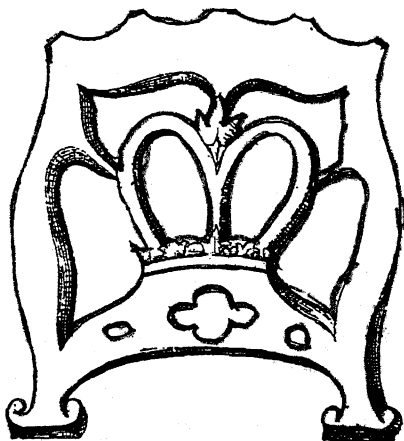


FIG. 2. BRIDGE OF A VIOL WITH FIVE STRINGS CUT THROUGH IN EVERY PART,

*Anthony Amati*

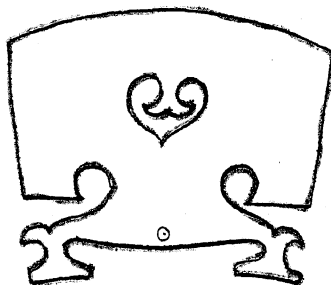


FIG. 3. BRIDGE OF A SMALL-PATTERN VIOLIN OF THE ANCIENT SCHOOL OF ANTHONY AMATI.

*Nicholas Amati*

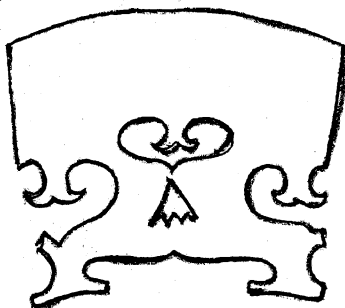


FIG. 4. BRIDGE OF A NICHOLAS AMATI.



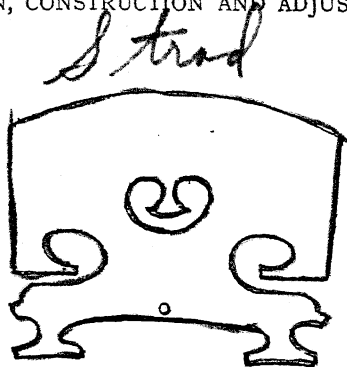


FIG. 5. BRIDGE OF A STRADIVARIUS.

### Design of the Bridge.

The design of the bridge is not, as so many people imagine, chiefly ornamental, but serves an important purpose in the conducting of vibrations. Its shape was determined by Stradivarius after many experiments, his idea being to allow only such vibrations produced by the strings to pass to the feet as would set the body of the instrument vibrating.

It is found that if a thin piece of solid wood be used as a bridge, although of the recognised outline, hardly any tone comes from the instrument. If two feet are shaped out of this piece of wood, the tone improves, and as the well-known design is gradually cut, the tone continues to improve. (Plate IX, Figs. 1, 2, 3, 4 and 5).

### **The Thickness and Wood of the Bridge.**

The bridge is generally made of maple-wood of medium density, and the grain of the wood should be at right angles to the length of the fiddle. It should not be of the same thickness, but should gradually taper from the bottom to the top, being twice as thick at the base as it is at the part where it supports the strings. This question of thickness will be modified according to the violin upon which it is fitted. If too thick, it does not allow the vibrations to pass quickly enough. If too thin the tone may be shrill; if too high, sluggish, and in addition tending to a difficulty in fingering; although the tone may be more powerful, this will be at the expense of the quality.

Bridges of old soft wood will be found to improve violins which are hard in tone, while the softer toned instruments may be made more brilliant by the use of a bridge of hard wood and close grain. A soft wood bridge will also assist in imparting a certain amount of mellowness to a harsh violin and in addition the bridge should be rather thin than thick. A hollow toned and high built instrument can very often be greatly improved by a thin bridge and thin strings. If certain strings on an instrument are fuzzy, and do not respond readily, they can be modified by thinning the bridge at that side with sandpaper; but this is a trick which is only indulged in to cover various defects on certain strings.

## Height of a Bridge.

Every violin requires a bridge of a certain height. It has been stated that the height of the bridge should never be altered to accommodate an exceptionally low or high finger-board, but that the finger-board should be adjusted correctly to the proper angle. This may be true, but so many violins have their necks and finger-boards made in such a manner that the bridge has to be cut to their angle. In some cases it is utterly impossible to fit even bridges of medium height to them. The remedy, to have the neck and finger-board re-set, is expensive, and does not appeal to all.

Otto, a well-known authority, says: "A good violin, whose wood has not been worked too thin, will require a higher bridge, as the vibrations are easier to produce, though the higher the bridge, the more perceptible become the faults of the fiddle; on the other hand, certain faults may, in some measure, be glossed over by a low bridge, at the expense, however, of the power of the instrument."

The height of the bridge cannot be definitely stated for reasons already given, but the rule is that its height should not be more than two-thirds of the length of the sound-post. Violins with high archings, like Stainer's, require higher bridges, but the finger-board will be the important guide.

### Position of the Bridge.

Placing the bridge nearer the finger-board weakens and softens the tone, while moving it closer to the tailpiece makes the tone loud and hard. The general position for it can be found by taking the notches in the *f* holes as a guide, and also the sound-post, provided the latter is in its correct position. This varies relatively to the build of each instrument, but two or three rules which differ only slightly, are given by authorities. One is that the bridge should be placed so that its posterior surface is  $2\frac{5}{8}$  inches distant from the interior extremity of the finger-board; another that it ought to be placed with the centre of the back edge of its right foot exactly meeting the front edge of the sound-post, which again is generally in line with the *ff* holes.

### Fitting the Bridge.

Some bridges are made with the feet broad, thick and wide apart, others with the feet thin, narrow and closer together. The general rule for the distance of the two feet from each other is given by the position of the sound-post and bass-bar. The back edge of the centre of the right foot of the bridge should be immediately in front of the front edge of the sound-post, and the left foot immediately above the centre of the bass-bar.

When shaping the feet to the curve of the breast or belly, they must fit so accurately that they appear to grow out of the violin. They should be so cut that the bridge has a slight tilt backwards towards the tailpiece to allow for the pulling forward of the strings. To obtain an exact curve of the breast so that the bridge feet fit well, the bridge should be placed in position and a light pencil mark made across each foot by resting the point of the pencil against the breast; they should then be cut or filed to fit this mark. A fine piece of sandpaper should then be placed in the exact part which the bridge occupied, the bridge again put in position on the sandpaper, and a gentle backward and forward motion given to it until the feet are rubbed down to the curve and slope required. If the feet are left broad, they will give a stronger body of tone. Many adjusters are inclined to make the top of the bridge too thin and the feet not thick enough.

The next point to be considered is the height. And it should be noted that the rounding of the bridge should follow that of the finger-board, which can be judged by looking straight down the strings from over the scroll. This curve of the bridge should be such as will admit of the strings being at equal heights above the finger-board. Neither bridge nor finger-board must be too round or too flat. This point will be clearly understood when bowing, as difficulty in playing on the G string will be experienced. If the curve of the bridge be too

flat, the bow will be constantly touching an adjoining string. Another fault which would result from a flattened bridge would be that the outer strings, G and E, would be too high for satisfactory playing. The right height of the bridge can perhaps be gauged by the amount of finger pressure necessary to force the string down to the finger-board. It should only require sufficient pressure to produce the stopped notes comfortably; on the other hand, the open strings should be quite free from any contact with the finger-board. A further point concerning the free vibration of these open strings must be observed in connection with the grooves in the nut of the finger-board. These grooves must not be worn through: this would interfere seriously with the vibration of the strings, and bring them in contact with the finger-board.

A rough guide to the height of the bridge is that it should stand about a quarter of an inch above the curve of the finger-board all over. It is not at all imperative to follow the idea that the E string should be lower than any of the others.

After the cutting of the curve it should be neatly rounded off with sandpaper and notches made for the strings. This can be done with a small file. The notches should be rounded (like a letter U) and not exceed in depth half the diameter of the strings.

### **Distance between Strings.**

The distance between the strings must be almost equal; the first and second strings, however, should be a little closer to each other than the rest, though not so close as to cause a finger on one to touch the next, or so close that one string, when vibrating, will touch the finger used for stopping a neighbouring string. Nor should they be so far apart as to render double-stopping difficult. The thickness of the player's fingers has also to be considered; as for a lady the strings would naturally be placed closer.

Very often an old violin has the dents left on its breast where other bridges have worn into the soft pine wood; when such is the case, the greatest care should be given to the perfect fit of the feet to these depressions.

### **Fitting Two or Three Bridges.**

It is a good plan to fit two or three bridges at one time, as the extras can always be kept in reserve. If a suitable bridge has been fitted, and breaks, take the pieces and glue them together, and if no prepared reserve bridge be handy, send the broken one to a good violin repairer to be matched, or buy one of the same quality wood and cut from the pattern of the original. Some dealers in instruments can so fake a violin by the adjustment of a satisfactory bridge, that to the uninitiated the instrument may sound very much better than it really is.

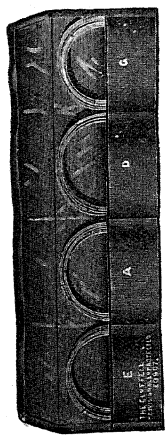
### **A Slanting Bridge.**

Care should be taken in tuning that the bridge does not slant forward, otherwise it would be liable to fall, perhaps with disastrous results. When it shows a tendency to lean in this manner—which generally occurs first on the side of the E string—place your thumbs on the violin just behind the bridge; hold the latter firmly with the aid of the left forefinger, and then gently pinch back the bridge with the right forefinger. If the bridge should fall at any time, loosen the strings before re-setting, and be careful to replace it in its exact position.





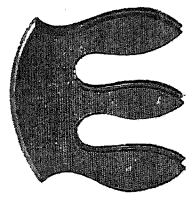
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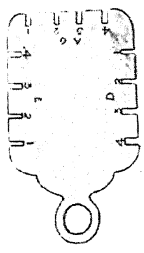
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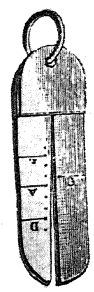
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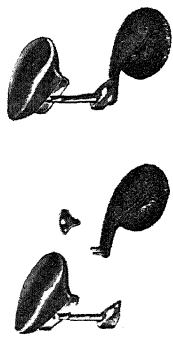
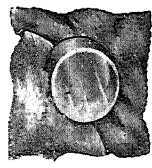
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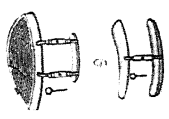
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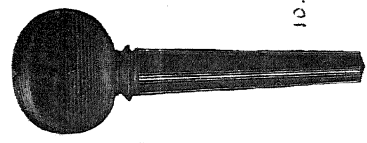
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10.



# PLATE X.

STUDENT'S VIOLIN ACCESSORIES AND FITTINGS (I).

## CHAPTER II.

### STRINGS, PEGS, TAILPIECE, ETC.

#### Character of the Strings.

THE strings of the violin are its vocal chords, and therefore occupy an important place in tone production. Many students fail to recognise that each string has a distinctive tone character. The first, or E string, is heard at its best in brilliant and dainty music. The second, or A string, has a reedy and more serious quality of tone, and is particularly suitable for music of a plaintive nature. Then we have the third, or D string, more sombre and mournful than the second, standing out in deep emotional passages, and giving breadth. Finally, there is the fourth, or G string, which so differs in character from the others, that whole solos have been composed for it. It is powerful, and has a rich, velvety tone, while it blends well with the other strings. The careful selection of all four strings

and their suitable adjustment to the type of instrument are important factors in the quality of tone produced.

### **Sound Quality of Strings.**

The quality of the sound produced by a vibrating string depends chiefly on its density, length, weight and elasticity, also partly on the manner in which its movements are excited. The longer, thicker and heavier a string is, and the less elasticity it has, the deeper will be the note produced by it, and vice versa.

The effect of the vibrations of strings may be seen by studying the violin, viola, violoncello and double bass. It will be observed that there is a marked difference in the length, thickness and quality of the strings used. The strings are not merely stretched over the body of the instrument; but their direction is altered by passing over a bridge on which they press with great force. The alteration in size and thickness is absolutely necessary to produce notes of deeper sound. In such instruments, greater depth of pitch is obtained by a covering of fine wire round the string, thus weighting it, and causing slower vibrations. This is readily seen in the case of the violin G string, in which the covering adds to the weight of the string without impairing its flexibility too greatly. Tension is an important factor in the tone of a string; to obtain this, the peg upon which the string is fastened can be turned so as to tighten or

relax the string, though this can only be done within a narrow compass of pitch. The four strings of the violin, each giving a note of different pitch, have to be regulated by the four pegs. The strings are of equal length from bridge to finger-board nut. Abele states: "The stretch of the G string would have to be about twenty-five times less than that of the E string, and an E string must not be stretched with greater force than is equal to a weight of twenty-five pounds hung on the string; a weight of twenty-nine pounds would break it. The amount of stretch for the G string on this basis would be one pound only; and, altogether apart from the fact that such unequal pressure on the belly would quite ruin any instrument, the tone of the G string under such circumstances would hardly be a musical tone at all."

It has been humorously observed that to scrape the inside of a cat with the outside of a horse accounts for the torturing cat-like sounds which the amateur violinist can inflict on his listeners. As a matter of fact, violin strings are not made from poor pussy's internal organs, and the origin of the name cat-gut is difficult to determine. One writer is of opinion that it is due to an expression used by Shakespeare in connection with the strings for a "kit violin" (pocket violin).

### **German Strings.**

An enormous number of strings are manufactured in Germany, especially at Mark-Neukirchen, Saxony. More than five hundred persons are employed in their make, and the output each year is numbered by millions. The gut of sheep is the chief material used, and this is imported from England, Russia, Denmark and Holland. Another material is hemp or silk imported from China; this, of course, is for the making of a different class of string. The finest strings obtainable are those made in Italy, from the intestines of the mountain sheep. They are known as Neapolitan, Roman, Verona or Padua strings, according to the seat of their manufacture. Unfortunately they are not so durable, but in point of tone cannot be surpassed. The Roman strings are very hard, brilliant, and slightly rough; the Neapolitan are smoother, softer, whiter, but hardly up to the standard of the Roman; the Paduan are specially polished, strong, but often somewhat false in tone. In comparison with German strings, Italian are superior; and they are naturally more expensive. German strings are strongly bleached, resulting in some cases in imperfect tone.

### **Italian Strings.**

Italians attribute the superiority in their strings to the climate, as the drying process can always be carried out by the sun, which is not always possible in Germany. The best strings are obtained from

sheep killed in the spring. Only part of the intestines are used; they are cleaned by putrefaction, assisted by heat, from all useless or foreign substances. Selected pieces of gut are then placed for twenty-four hours in water, which is continually changed. They are then taken from this immersion and the outer skin scraped away, leaving a transparent membrane. The material is now ready for the manufacture of the strings. The selected and cleansed strips are placed in a mixture of *aqua fortis*, or a preparation of the lees of wine and water.\* They are passed through several courses of these baths, beginning with a weak solution and increasing in strength. It is in the strength of these solutions and the manner of their application that the great secret of Italian manufactured strings is to be found. This process takes about eight days. A certain number of strips are soaked in the weak solution, the solution being renewed several times daily; upon renewing, they are taken out, shaken, and exposed to the air for a short time; then again immersed. The process is repeated the next day, but with a stronger solution, and so on, until about the eighth day, by which time the gut will have become clear, pure, and very light in weight. When this stage is reached, the strips are at once stretched and washed in fresh water, so as to remove the final

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\* The authority, De la Lande, states that the weakest mixture is made up of four parts of lees to two hundred parts of water, and the strongest, twenty parts of lees to two hundred parts of water.

traces of the solution. They are then wound upon a wheel of about three to four feet in diameter, during which process the operator feels the strips with his fingers so as to detect any uneven lumps and to see that the gut is perfectly cylindrical.

Strings are made of several strips, the thinner the string the less number of strips being required; for the violin E three pieces; four for the A string; and six for the D string. Of course, the thinner the string the tighter the strips must be wound round the wheel.

After the winding process, the strings are stretched very tightly on a wooden frame, being fastened to pegs. They are then given a sulphur bath. This procedure consists in their being placed in a room heated to a certain temperature, thus almost drying the strings. During this drying, the sulphur is burnt in the chamber for about six hours out of the twenty-four during which the strings remain in the chamber. Upon removal, they are again placed on the winding wheel for a final stretching, after which they are burnished. For the thicker strings, the stretching, sulphur bath and burnishing are repeated many times. The final drying then takes place in the open air, and provided the weather is warm and sunny, the strings become quite dry in about six hours. As a finish, olive oil is rubbed over them, and they are then cut into lengths and rolled round wooden cylinders ready for the market. The oil acts, perhaps, as a preservative, but it is extremely



unlikely that it answers any other purpose. A string is never true in tone until this oil has been worn off by use.

Good strings should be perfectly rounded, of a clear and almost transparent colour, and should not show the twists of the strips. They should also feel firm and dry to the touch, and have great elasticity.

### **English and French Strings.**

English or French strings cannot be compared with Italian or German, especially the E strings; that is, as regards quality, not durability, Italian strings of the finest quality being somewhat doubtful as to lasting power. It is often difficult to obtain genuine Italian strings, as so many processed strings are now on the market. These strings are usually hardened by the aid of chemicals, which give them a pale, very white and transparent, dry appearance, and will, on uncoiling, rebound like a strong steel spring. It is claimed that they are true and reliable, but they have not that fullness and richness of tone to be found in the Italians. For orchestral work, where economy is of importance, they are, however, of great service.

The violin G string, which is finely covered with wire, is another department in the manufacture of strings. Fine E strings are chosen, and the wire, either silver, copper, or gun-metal, woven round the string. It is most important that the wire should be evenly wound and of the right tension, as an error

would result in the breaking of the string when pulled up to pitch. The wire is manufactured largely at Nuremberg and Furth, in Bavaria. Gold-covered G strings have been introduced, but the manufacturers do not appear desirous of submitting any samples for testing purposes; therefore no opinion can be given as to their claimed superiority over the silver-covered strings. Probably a good silver spun G string would be superior in tone.

### **The String Gauge.**

Now comes the important question of deciding the degree of thickness of the strings most suitable to a particular violin. String gauges are sold for the comparison and graduation of the thickness of each string. These can be purchased for a small sum at any shop where violin fittings are sold, and when the most suitable degrees of thickness have been decided, they should be marked on the gauge and all future strings purchased accordingly (Plate X, Figs. 3 and 4).

Many players buy strings promiscuously. Such a course is very unwise, for the violin is tuned in fifths. These must be perfectly true, so it is imperative that the strings equally balance. Should this be neglected, and an instrument be strung with a very thin E, and a very stout A, stopping or playing true fifths becomes almost an impossibility, as the actual fingering on these strings would vary, although possibly only to a slight degree.

### **Strings most Suitable for the Violin.**

The precise thickness of a string best suited to a given violin can only be decided by experiment. A safe rule is to have the strings thin rather than thick, for an instrument which will stand thick strings is rather exceptional. The matter depends chiefly on its age and build. In some cases it is as well to select strings which are also suitable to the fingers. Thin strings respond more readily and give a clearer tone, and carry further, though to the player's ear they may sound weak. They are certainly more brilliant and clear in harmonics, and for passages running into the higher positions. To test the fifths correctly, open strings should not be played, but stopped fifths, such as D on the second string, with A on the first. A violin which is "tubby" in tone (that is, deep and hollow as well as harsh) may be improved by using thin strings. Some players like a thick D string, "because it gives more tone." This is not the case; the strings are so graduated that their pressure on the breast of the instrument produces equality of tone both in open as well as stopped notes.

### **Choice of Strings, "Acribelles."**

In choosing E strings, gut should always have the preference, although for those who specially suffer from perspiring hands, such strings will prove expensive. "Acribelles" E strings, manufactured with

silk and coated with a white substance, are tough and resisting, and are of value where much playing has to be done. They are also found useful in the summer, when gut strings break frequently owing to heat and perspiration. The tone is fairly good when they are freshly used, but is marred by a wiry character; added to which drawback is the continual stretching before the strings are perfectly in tune. Sometimes, after a few days' playing on, they become ragged and produce bad tone. They appear as well to have an effect on the tone of the other strings, and they can hardly be compared for quality of tone with good gut ones.

### **Steel Strings.**

Many violinists use steel E strings; from the point of view of economy they may be useful, but as regards tone, they leave much to be desired. The quality of such a string is most noticeable when playing, in comparison with that of the adjoining gut strings. They give clear harmonics but do not balance in gauge with the other strings, and great care has to be taken in the fingering for double-stopping, to avoid faulty intonation. Another consideration is the wear on the hair of the bow, as well as the tendency of this metal string to vary in pitch owing to its susceptibility to atmospheric changes. Moreover, there is the difficulty of keeping it in tune, which is such that special adjusters have to be used,

and ultimately, there is the annoyance of the string cutting into the bridge.

### **Aluminium Strings.**

D and A strings are also manufactured of aluminium, but they are open to the same objections as the wire E strings.

### **Gut Strings.**

The finest gut strings are the Italian, from Naples and Padua; they are most reliable, both as to true-ness and tone, giving a brilliant and ready ringing response to the lightest staccato of the bow. A difficulty is the obtaining of genuine Italian makes; there are so many imitations, and one can only trust to the reputation of a well-known firm. At the same time, one should, if possible, ascertain if the strings are raw from the maker, or have been already correctly seasoned. When purchasing, avoid gut strings which are perished, or stale stock re-oiled for selling purposes. This oiling dulls the tone and rots the string. Rubbing strings with almond oil as a preservative, has been advised, but, apart from the oil used by the maker, such a process appears useless. Honeyman remarks: "It is recommended by some that the strings should be occasionally rubbed with a flannel cloth saturated with almond oil, but I do not approve of an oiled string under any circumstances, my experience being that the drier a string can be made, without forcing, or

its actually beginning to decay, the better will be its tone, and the greater its durability. A string, indeed, can be 'seasoned' just as judiciously as a piece of wood, by being kept for months wrapped in paper and enclosed in a tin box, in a dry, cool place. Strings seasoned thus may be kept for a year and longer, and give out a more ringing and brilliant tone than those fresh from the maker."

September is a good time to buy a stock of strings, as they ought then to be of a new season, fresh from the makers.

### **Storing Strings.**

Honeyman's advice as to keeping strings to be "seasoned" is excellent, and it is always advisable in any case to keep those not in use well preserved by wrapping them in a piece of oiled silk or waxed tissue paper, and enclosed in an air-tight tin box for a few months before using. It is frequently noticed that raw new strings are not nearly as reliable as those which have been kept, as just stated, neither are they so brilliant, but pupils cannot always afford to stock a quantity of strings. Three D's, four A's, six E's, and two G's, would be sufficient for the average player. Care is especially needed with regard to the preservation of the G strings, as these are easily tarnished and spoiled by exposure to the air and to moisture. They should be wrapped, each one quite separate, so as to avoid contact with the gut. It will always be found more economical to

use good strings, as they are more reliable. (Plate XI, Fig. 17.)

### **Carrying Strings.**

For carrying strings in the pocket, in case of accident, a very useful little wallet made of thin leather or glacé kid, and lined with oil-skin, divided into four pockets, can be purchased. This folds up and fastens with a button, making a flat, small and compact pocket-book arrangement. (Plate X, Fig. 1.)

### **The G String.**

The G string should always be a silver wire covered one, in preference to the cheaper copper-wired quality, which are so often dull in tone. The price is generally from two shillings to three shillings and sixpence. A good silver fourth should last, with care, for a considerable time, so that these will be found cheapest in the end. Again, a good fourth will impart some of its tone quality to the other strings. It does not follow that a new silver G string will always sound well; there are great varieties of silver-covered fourths, some of them coarse and gritty, others smooth and soft. This, again, depends upon the particular violin. Some instruments require a hard and brilliant G, others a soft-toned one. Another drawback to common G strings is that they become in time coated with verdigris. Another point to note is that all G's are not

*true*, and it is therefore safest to buy a medium-sized rather than a very thin one. A thicker string bears more pressure from the bow; on the other hand, one too thin will not offer sufficient resistance, and will cause a rattle, and produce thin quality of tone. Very often this buzzing or rattling noise will occur from time to time on a suitable string. There are two reasons for this fault, either a change in the atmosphere, which, if wet, affects the gut by causing it to shrink in its covering of fine wire, or the string is badly made. The former cause will generally be found to right itself in the course of a few days; if this does not effect a cure, a little almond oil can be rubbed into the string by the aid of a piece of flannel, the string being, of course, first removed from the violin and the oil allowed to soak in thoroughly, and then dry before using. Disappointment is often experienced through a perfectly new silver string breaking after a couple of days' use. Many firms will replace the broken string with another. Such a breakage is due to one of two causes, a faulty or perished gut, or carelessness in the process of wrapping the wire covering. No G string, however good in quality, will sound really well until it has been played upon for a little time. This applies also to the other strings in a lesser degree.



### **Wearing Strings.**

Some players rub a bow well resined along that part of the new string used when playing. This is stated to make the bow bite the strings at once. The advantage, if any, is certainly not great; it may be true that strings a little worn with friction of the bow will give a fuller tone, as more surface is given. But such surface should be obtained by practice. Another habit is to tug at a new string to stretch it. This tugging should be avoided, as it affects the tone.

### **Care of the Strings.**

Strings should always receive careful attention, both in adjusting and storing. If they are exposed to the damp, cold or heat, they become false in tone and unreliable in durability. In handling, the utmost care should always be taken not to bend or twist them when cutting a length from the coil. This weakens the string, injures its tone, and detracts from its quality.

From a mistaken conception of economy, some coil the extra length of the string round the scroll of the violin, instead of cutting off the single length required. Such a proceeding is foolish, because the unused portion of the string is open to injury, weather conditions and dirt. When replacing strings always see that each length keeps approximately to its own side of the peg-box, and never twist round the peg a greater length of gut than is actually

necessary to secure it firmly. Too much string wound round the peg causes the latter to lock or jerk in its socket. A string is not necessarily bad because it breaks on using. The causes may be many, as, for instance, the sharpness of the bridge, finger-board-nut or tailpiece, incorrect fastening or knotting at the tailpiece, or too great a length of string being wound round the peg, thus interfering with the other strings.

At times, strings give a whistling, jarring and double sound, the latter fault occurs when they are being played as open strings. Needless to say, these strings are unfit for use.

Some strings have great lasting power. The E may last for a considerable time. The others being thicker, last longer. It is not advisable to keep strings too long on a violin. The gut strings D and A should be replaced by others, for their clearness and purity of tone disappear after a certain period of hard playing. Often a tough E string is a *screamer*, and, on the other hand, a fine-toned one breaks too quickly. Those which come up to pitch with but a few turns of the peg, are generally durable.

### **Frayed Strings.**

If it is obvious that when a string is fraying or showing signs of wear or breaking, it should be at once removed. Such a string breaking suddenly may result in an accident to the face of the player. When

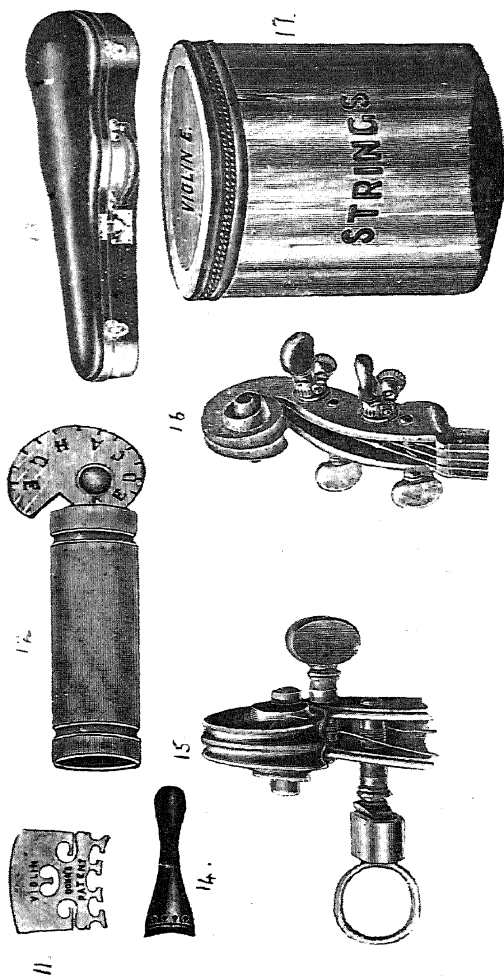


PLATE XI.  
STUDENT'S VIOLIN ACCESSORIES AND FITTINGS (2).



the worn part is at the nut, the long end will be directed towards the player, if the string chances to snap at that part. Sometimes a piece will break right out of the middle.

### **Judging Strings.**

The firsts should be transparent and clear, not too white or opaque, because if this is so, they will usually produce bad tone, as the E strings are not made of more than a few threads; therefore, complete absence of transparency denotes inferior material. If they feel limp and greasy, and are dull in colour, they are not durable, and may be stale stock. There should be a springiness and absence of any appearance of strand windings or spots when held up to the light. Good strings when unfastened should recoil like a spring. If they feel too dry, they will often be screamers in tone. These remarks apply likewise to the D and A strings, although in a lesser degree; still they are not so clear to look at as the E, owing to the fact that they are spun with several threads. Should they show a yellowish hue and the twists of the strands, they are generally old, and consequently the tone is likely to be dull and thick.

### **False Strings.**

False strings should be strongly avoided as far as possible. The recognised test for detecting them is to hold one length stretched out between the thumb and first finger of each hand, giving the string a

twitch with the second or third fingers. If more than two lines are seen vibrating, the string is false. Spohr recommends this test, but in the cases of the A and D strings it may be misleading, since the lines are frequently not very definite.

### **Tested Strings.**

Tested strings are good, and the price according, but they cannot be guaranteed always to last well, owing to the polishing which must wear down some of the threads. Often a dealer is blamed unjustly for bad strings; but it must be remembered that the majority of strings come from abroad, and are occasionally affected by the journey and climatic conditions, quite apart from the possibility of being faulty when sent from the makers.

### **Where to Obtain Good Strings.**

Where can good strings be purchased? After many years' repeated trials of various strings, those sold by the following firms amongst others can be recommended:

Hart and Son, London. This firm also supplies a fine-toned gut Roman E string.

Hill and Sons, London.

E. Withers (Wardour Street, London). This firm has splendid tone-tested gut strings, and supply a choice Florentine silver G.

Beare, London. This firm also has splendid tone-tested gut strings.

Chanot, London. This firm also has good tone-tested gut strings.

Thibouville-Lamy, London. This firm also sells "Euterpia" E strings, a good wearing article, at a reasonable price. Their silver G strings can also be recommended.

Race, Douglas, Isle of Man. Also supplies a fine rough Neapolitan string.

D. L. Thompson, Dundee. Also makes a speciality of seconds and thirds.

Kohler and Son, Edinburgh. Their strings are of good quality and reliable.

Many other firms could be added, but space does not permit.

### **Adjusting Strings.**

The strings selected, the next step is their adjustment. Simple as it may appear to the novice, the method of adjusting requires care, patience and experiment. Strings are sold fastened in coils tied round with pieces of catgut. It is best to unfasten the string by pulling these red bands round gently until sufficient length of string is free to cut off for one length of the violin, then the remaining portion will be still preserved in its original coil. If this cannot be done, the binding ring may be cut, but care should be taken not to cut or mark the string itself at the same time, as a very slight mark injures the tone-power and weakens the string.

Strings differ in length, some firsts will be suffi-

cient for three lengths, others only for two. The D's and A's are mostly long enough for two, but the E's vary according to quality. The G string is only supplied in one length. When cutting from an uncoiled string, be careful to measure sufficient for the violin; measurement should be made from the top curve of the scroll to the tail-gut or farther end of the tail-piece.

### **Fastening the E String.**

The method of fastening the first string at the tail-piece is somewhat different from that in the case of the other strings. The length having been cut, then make a firm single knot, pass it through the hole in the tail-piece from the top and bring it up again on the outer right side, from beneath. Then pass it just under the length running toward the bridge, and place it immediately behind the little ridge on the tail-piece. When the string is pulled up to pitch the knot becomes securely locked or fastened. Another somewhat similar means of fastening is to pass the knot through the hole in the tail-piece, bring it out underneath and up over the side, slip it into the notch, and then bring the string over the knotted end, thus locking it into its place under the tail-piece; tighten carefully. The use of a knot is condemned by many who advocate that the string should be actually tied into the hole at the tail-piece, but the two methods already described appear more satisfactory. Some E's are sold with



loops at each end for fastening, but these loops should be tested before use as they are often weak and insecurely made. In fastening the D and A strings, a single knot, just large enough to pass through the hole in the tail-piece, is sufficient to give a firm hold. With G strings a loop is made by the manufacturer, the loop threaded through the tail-piece slot, and the string passed through the loop. If the string is without a loop, it can be adjusted in the same manner as the D and A strings.

### **Fixing Strings on the Peg.**

In fixing strings to the pegs, be sure that the ends of the strings are always twisted and brought up towards the inside of the scroll box; the ends of the E and A should be under the pegs towards the right hand, and the other two placed in the reverse way. This locks the pegs securely in their holes and prevents slipping. To make this clearer; when the string has been fastened at the tail-piece, bring the other end over the bridge to the E peg; insert the end through the hole in the peg-stem, and turn the peg half a turn from you; the end of the string will be pushed forward from below the peg; grip this with the fingers and give the peg another half turn in the same direction, then pass the end of the string under the string between it and the peg; still holding the end of the string, again twist the peg. The end will be caught and nipped between the peg and string and firmly held. In some violins difficulty is

experienced with the A string; the peg into which this string has to be inserted lies so close up to the scroll that it is necessary to use a small pair of grippers in order to get hold of the end of the string. A useful combination of nippers and scissors, of a handy compact size for the pocket or violin case, can be obtained (Plate X, Fig. 2.)

To overcome this difficulty of adjusting the A string on the peg without the aid of grippers, the peg should be gradually turned as soon as the string is sufficiently passed through the hole, while pressure is given to the string to force it through. Then with a quick turn of the peg it can be caught and fixed. Although it is difficult to describe the mode of stringing clearly and correctly, it is very easy to understand when practically demonstrated. Proceed very gradually, pulling the string up by about two notes at a time. This will allow for stretching. Pulling a string to stretch it should be avoided if possible. The strings must not catch or overlap and cross each other in the scroll-box, otherwise in turning the pegs, they may catch up adjoining strings as well and place them out of tune. This fault is very often due to badly fitting pegs which have worn so much into the peg-holes that the hole for the string becomes at too sharp an angle. Watch the bridge when pulling up strings to pitch; many bridges have been destroyed by carelessness in this respect. The strings pull the bridge forward when tuning, and the sudden crash and jar caused by the

breaking or fall of the bridge will make the sound-post fall and also perhaps damage the breast of an old and valued instrument.

### **Improving a False String.**

Strings are sometimes false in tone owing to a fault in manufacture. Such a fault can sometimes be improved by reversing the string, as it often happens that one end of a string is thinner than the other. Should such be the case, the thin end must be towards the pegs. It is difficult to discover which is the right or wrong end of a violin string. For strings consisting of only two lengths, such as the A and D, cut the string in halves, and knot where you have cut; the knotted end is for insertion in the tail-piece.

With strings consisting of three lengths, the chances are that the outside lengths will be more true in tone than the centre length.

### **The Pegs.**

Violin-pegs should be of rosewood, ebony or box-wood; the first-named being much the best. Ebony is slippery and apt to wear too smooth, as well as to crack. The constant slipping of the pegs indicates that extra pressure is made in turning, and as a result, they wear too far into their sockets in the scroll-box; this causes the hole receiving the string in the peg to be past the correct line. When this happens, a new hole should be drilled closer to the head of

the peg, at right angles to the original hole, in the opposite way to the grain of the wood; should this be neglected, no string will remain in tune, and the peg will be constantly slipping, jerked out of its position by the side pull of the string. When a peg has become slightly smooth, and slips, it can be improved by rubbing with moist-whiting and an old dry piece of soap. A composition called "Gompo" is sold for this purpose. For good tuning the comfortable and reliable working of the pegs is so necessary that every care should be exercised in their proper fitting.

### **Peg Holes.**

The holes for the strings should be about one-eighth of an inch from the side of the scroll-box, or it will not lock easily. A badly fitting peg will move by jerks, making tuning difficult; this is caused in many cases by the socket of the peg, or the peg itself, not fitting smoothly all round. The student can sometimes remedy this, but it is generally better to take the violin to a good fitter. If adjusting it personally, then note that the socket of the peg should be smoothed out with fine sand-paper glued round an old peg; then take the new peg and scrape first with a file, and afterwards with the sand-paper, until it is of the right size; next work in the new peg with black-lead till both peg and socket at the parts in contact are perfectly smooth and work easily, care



PLATE XII.  
VIOLIN BY HART AND SON  
(STRADIVARI MODEL).'



having been taken to file evenly, and not use pegs which taper too much.

### **Locked Pegs and Turner.**

Sometimes a peg will become so locked in its socket as to be almost immovable, through having too many coils of string round the peg. A very useful little "peg-turner," invented by George Withers, of London, some years ago, is of real assistance to those with weak fingers. It resembles a large violoncello peg with a circular handle, and has a hollow socket lined with a soft material. This socket is large enough to fit over the head of any violin peg, giving extra leverage. (Plate XI, Fig. 15.)

### **Metal Adjusted Pegs.**

Metal pegs can be fitted to a violin; their chief recommendation is that exact and easy tuning is certain, and the chance of slipping or locking is practically nil. They may be all that is claimed for them, but should they go wrong they cannot be repaired, but would have to be returned to the firm who fitted them. Moreover, there is the question of their weight, and also the possibility that at some time after use they may cause a jarring; consequently their merits are not strong enough to make them popular for violins and violas. (Plate XI, Fig. 16.)

### **The Tail-piece.**

The tail-piece is usually of ebony, though ivory, celluloid, etc., may be used. Its importance is generally overlooked, but it is as well to give some care to the choice. A large tail-piece is naturally more suitable for a large and powerful instrument, than one that is small and of light weight. It must be remembered that one too large for the instrument means extra weight on the strings, and upsets the balance of tension, while one that is too short will necessitate too great a length of string behind the bridge.

Many players have an idea that the strings from the back of the bridge to the tail-piece are of no importance to the balance of tone. This is not correct; everything has a result upon tone in fiddle adjustment. The spacing of the holes and slits for the strings in the tail-piece should be carefully gauged, and when the strings are strung they should form an angle behind the bridge very similar to that in front of the bridge. The distance from the bridge to the tail-piece should also receive attention. Too long a tail-piece has the effect of bringing the strings too close together and too near the bridge. A rough guide is to have a tail-piece of such size that the distance from the end where the strings are fastened is about the same as the width of the bridge. The string slots should not be too close together or a weakening in the tone will be the result. (Plate XI, Fig. 14.)



### The Tail-gut.

The tail-gut attaches the tail-piece to the button of the violin. This is generally a thick piece of coloured gut, and should be so fastened to the tail-piece that the end of the latter just meets the little ebony ridge in the violin above the button. In fixing this tail-gut to the tail-piece, too great a length of gut should not be left between the tail-piece and ridge of ebony; when this is not observed, there is too much *give* below the bridge, and as a result the tone is affected and constant tuning required.

When the tail-gut has been passed through the two holes in the tail-piece for its reception, the ends should be bound together evenly with a thin piece of disused E string and fused with a lighted match to prevent the binding slipping. The fastened ends should be quite sunken in the hollow depression of the tail-piece, otherwise they are liable to come in contact with the breast and interfere with the vibration. It seems a great pity that a more stable method of fastening the tail-piece has not been evolved. Tail-gut gives, and, like the strings, is subject to climatic conditions; it is also affected by the heat and perspiration from the neck of the player. Apart from this, a constant danger is to be anticipated by a breakage of the gut—a serious matter if the violin is being played at the time. A piece of shaped copper wire covered with rubber would probably answer the purpose better. It would allow

greater rigidity of the tail-piece and be more lasting, while the pitch of the strings would be retained. The ancient viol had no tail-gut; the tail-piece was fixed by a hole cut through it, and was passed over the head of an upright which was fixed into the bottom block of the viol.

## CHAPTER III.

### NEW VIOLINS.

#### New Violins Unsatisfactory.

OTTO states : "When a new violin is first strung, the tone is clear, harmonious and easily produced; but after exercising it for eight days, it becomes harsh and offensive to the ear, so that the instrument seems as if it would never be fit to be heard again. In this second stage, perhaps, the greatest number of instruments are spoiled from the want of patience in the possessor, by scraping out the wood, changing the bass-bar, and other fancies. Those also which are too weak in the wood now become bad, and do not improve afterwards. They never reach the third stage; but, by persevering in the practice of two notes together (in the case of good violins), the third stage is gradually attained, at which the instrument, like wax, receives every impression, and the tone, having recovered its power and fullness, again becomes clear and beautiful. This takes three months to effect."

There are many classes of new violins, some beautifully made, and better than inferior old ones. Those old instruments which were not well made, or have been badly repaired, or received such careless use that the instrument retains none of its original beauty of tone, must decidedly take a secondary place to new violins.

New violins by various makers are surprisingly different in tone; there is usually a certain amount of woody, hard tone, and only in the products of a few makers has this hardness been eliminated. An English maker, the late George Pyne, produced some very fine-toned instruments, also W. H. Hill and Son, Thomas Simpson, of Birmingham, and Hart and Son (London). One is inclined to give them an important place in the modern English school. (Plates XIII and XIV.)

The violins made by Stradivarius and Joseph Guarnerius in their best work of finest preservation give us a standard by which our new violins may be compared; but time will decide whether as they mature they will equal the work of the old makers named. Their chief characteristics are:

1. Carrying power.
2. Clearness and trueness.
3. Sweetness.

The chief attribute of an Amati is sweetness, but it suffers in power. Joseph Guarnerius stands for power, but in Stradivarius we have the ideal combination of all three qualities, which modern makers do not seem to have reached, much less excelled.

But a few reliable British makers are working and investigating with great care and skill with a view to achieve results which shall compare favourably with the best of those of the past.

Dr. W. D. Haslam\* remarks: "Let it be taken for granted that a new violin is made of well-seasoned wood. The varnish has to dry and become as hard as its nature will permit. Afterwards the continued use of the bow will gradually induce the wood to vibrate; to overcome the stiffness of the joints, for the wood has absorbed glue round them, the bowing is to be continued until the vibrations travel easily throughout the whole fabric. After this has been accomplished, the violin has become sensitive and sympathetic to the use of the bow, it has reached the zenith of its capacity, and this would take two or three years to accomplish."

It may, however, be asked, why spend these years grinding at a new instrument to obtain that which would be more fully matured in a good and carefully preserved old one? In any case, time must elapse before a new violin can produce its best tone. A sympathetic vibration of all the parts is essential.

### Tests for a New Violin.

In testing a new violin, six important points should be remembered:

1. Artistic make.
2. Equality of tone on every string and position.

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\* "Violins, Old and New," "The Cremona" (1910).

3. Quality of the wood and its varnish.
4. Freedom from harshness.
5. Ready response to the bow.
6. Carrying power and adjustment.

As a general rule the tone of a new instrument is inclined to be loose and woody; and in playing rapid passages a want of quick response is felt. Moreover, its carrying power is not great (through not being "set" with age), and it gets out of tune quickly. No instrument should be chosen which has not what is termed a *speaking tone*, or a ringing quality; to test this point a few scales in two or three octaves in both sharp and flat keys with staccato notes should be lightly played. Directly following on each note being played, there should be a slight continuation of the tone, which can be compared to the sound caused by a saucer when struck with a pencil.

A succession of good even chords should next be played both loud and soft. By carefully listening to the playing, not only is the general effect of each chord ascertained, but the effect of every note in that chord. The object of playing both loud and soft is to get a better idea of the merits of the instrument, as some sound remarkably well under pressure of a strong bow, yet with light strokes the tone ceases with the lifting of the bow. It can also be ascertained by this method whether the tone be free or stiff to produce. In scale passages, it should be noted whether the tone quality remains even when passing from one string to another, as any variation



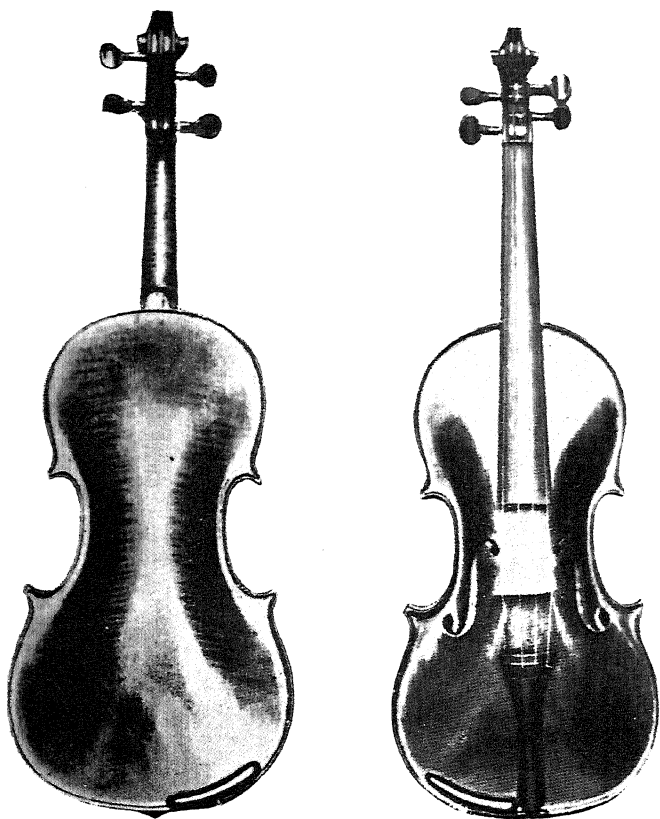


PLATE XIV.  
VIOLIN BY THOMAS SIMPSON (BRITISH).



under trial is correctly strung with good, suitable and perfectly gauged strings, as false strings cause false notes and chords, and a good instrument may be wrongly condemned owing to this mistake. Remember, too, that no violin should ever be chosen from merely playing slow melodies upon it, as a good player can make practically any instrument sound well in the performance of slow music. It is in rapid passages where the faulty instrument betrays itself by lack of free response to the quickest and lightest touches of the bow. Many of the notes may be inaudible when a large compass of the instrument is used, necessitating a continual crossing of the strings.

### **Weight of a Violin.**

It has been stated that modern violin makers when copying from old masters have not taken into sufficient consideration the weights and thicknesses of the models they copy. One authority is of the opinion that most of the great contemporaries of Stradivarius made their instruments of the same weight as his; and that there was some sort of recognition amongst makers of the Stradivarius period that a full-sized violin should weigh about  $13\frac{1}{2}$  ounces when fitted for playing. Some other authorities agree as to this weight having an important influence both upon the tone and quality. It is obvious that good tone does not depend upon thickness of wood only; as we have already stated, there are other equally

important measurements to be considered. Disputes still rage round this matter. In any case, it is most important to remember that the construction of a really fine instrument must be perfect in all details. A large number of modern violins by good makers, being weighed, have been found to be from one ounce to two ounces, or more, heavier than full-sized Italian fiddles of the Strad period. Without fittings, a Strad violin weighs almost exactly  $9\frac{1}{2}$  ounces, but modern fiddles range from  $10\frac{1}{2}$  to  $11\frac{1}{2}$  ounces. The sides and neck of a violin average just under 4 ounces, which leaves  $5\frac{1}{2}$  ounces as the weight of Strad plates.

Experiments have shown that the lighter the weight of a violin the more powerful tone it gives, provided it is not below a minimum weight. In this latter case an undesirable quality is developed, for instance, tubbiness—that is, tone loud under the ear but which does not carry. It must be remembered that Strad instruments vary in tone, as is well-known to all connoisseurs.

### **New Violin as Solo Instrument.**

It may be said that no raw new violin, however well made, is quite satisfactory as a solo instrument. The tone is too loose and woody in the majority of cases; there is no immediate response to the quickest and lightest action of the bow; arpeggios are not always clear and brilliant; in a hot concert hall the tone will not carry like that of an old instrument.

It is difficult to keep in tune; it not being "set" with age. Undoubtedly, therefore, for solos the choice must be given to a genuine old violin artistically designed and well preserved—a treasure not to be rivalled by a modern instrument.

In orchestral work, where finer shades of tone quality cannot stand out, the objections mentioned above have less force, but even in the orchestra the best new violin sounds very small and weak in tone as compared with the older instruments.

## CHAPTER IV.

### OLD VIOLINS.

#### High Prices for Old Violins.

LARGE sums are paid for old violins made by celebrated Italian makers, but the prices are often fancy ones and out of proportion to their value from a playing point of view. There are also instruments indisputably genuine, but of second-rate quality for the player's purpose, and this apart from their condition and preservation.

The instruments made by Stradivarius, Guarnerius and Amati can only be purchased by the wealthy, although there are good old makers whose instruments are within reach of the average purse.

Age mellows an instrument, but it must not be forgotten that this alone will not improve it to any great extent if it is of inferior make. Only a good instrument will mature by use and age; and the tone of an old violin also depends on the care and treatment it has received throughout its history. Old violins must not, in the first place, have been artifi-

cially seasoned if good results are to be obtained from them. The process of drying must have been accomplished naturally. Artificially prepared wood results in a tone which is good at first, but rapidly deteriorates. Time mellows the wood, and the act of constant playing exerts a very beneficial influence.

Italy, owing to its warm sunshine is naturally an ideal place for the seasoning of the wood. Travelers who have visited Stradivarius's house, remark that it was heated through by the sun like an oven, and it was in the loft or attic that the great master kept his wood.

### **The Perfect Model.**

All agree that Stradivarius brought the violin to perfection, and his instruments have been copied down to the minutest detail by even some of our greatest makers. (Plate XV.)

### **Old Violins not always Good.**

Many important points must be remembered in connection with old fiddles:

1. Is the record of the instrument such as to suggest that it contains all the original parts, and that the tone was good in the first instance?
2. Has it been properly cared for and preserved?
3. Has it been much played upon?
4. Is it powerful? Is it a good tone-carrier?
5. Who is the maker?

If the above questions can be answered satisfac-

torily, the instrument is undoubtedly the superior of a modern one. Many cherished old ones might very well be relegated to the waste-heap as far as their tone is concerned. Probably they *never* possessed good tone. Some Stradivarius violins leave much to be desired in their finish, and even some now in use can hardly be compared favourably with some instruments of good modern makers.

W. H. Honeyman, in "The Violin and How to Master It" (E. Kohler, Edinburgh) says: "Cremona violins were not all good, and many have been hopelessly injured by being scraped, broken, patched, or "improved" by ignorant or fraudulent makers. Let the violin player get that into his head lucidly and clearly to begin with, and he may be saved from disappointment even if a genuine instrument of the kind should come his way. But such as were good and have survived uninjured to our day, partake so much of the nature of rare antiquities that they are nearly all—more is the pity and crying shame—in the hands of people who never use them, who will hand them down to their descendants, and keep them hugged and guarded till they crumble voiceless and mute into dust. There is something wrong there, but it is difficult to see how it could be remedied, unless some of these wealthy connoisseurs should see the error of their ways, and *lend for life* the instruments they possess to the different soloists of eminence, who, alas! are too often forced to discourse



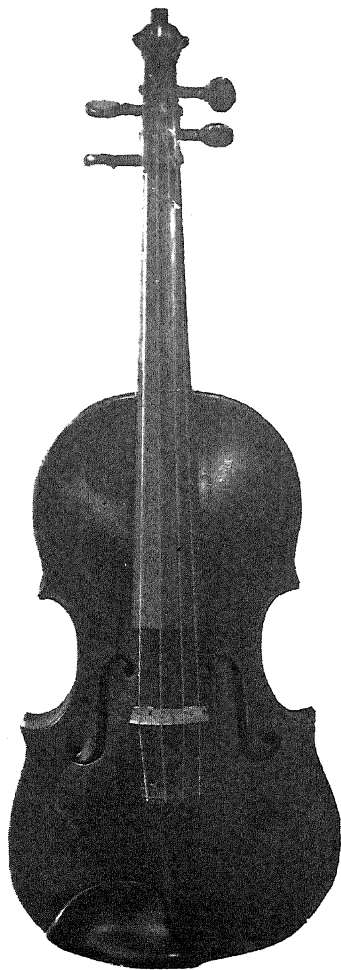


PLATE XVI.  
VIOLIN BY THOMPSON (THOMSON).



most eloquent music from poor copies. This would be a boon to the world, a benefit to the instruments—for a good violin is greatly improved in tone by being constantly played by a good player—and no loss to the donors, as the violins would return to them on the decease of the player. This suggestion seems somewhat quixotic, but it is not nearly so outrageous as that these gems of instruments should lie rotting in disuse."

### **Violin Collecting.**

Many wealthy patrons of violin playing generously lend their fine instruments to famous players, but one would like to see this privilege more widely extended.

For beginners on the violin to have or purchase such gems would be sacrilege. Still, it is only a master who can bring forth the best tones that such instruments possess.

The mania for collecting fiddles has spread from the ordinary fiddle scraper to the wealthy non-player, and this is to be deplored. The collector can be looked upon with some toleration only for having preserved fine instruments which would otherwise have become worn out by too much wear and tear. But even so, violins do not improve by being placed in collections or exhibited under glass cases. Indeed, such a proceeding in many cases causes decay, so that all violins thus dealt with are not preserved. It is an established fact that the

wood of violins, if in use, wears but little, thus the so-called "preservation" of them is anything but satisfactory. Is it a matter of vanity with the wealthy collectors? One is denouncing not the collectors but the collecting. People of leisure are met with who go fiddle-hunting; some are not content with the dealers, but if their pocket will allow, take holidays in Cremona and other parts of Italy, with the innocent idea that genuine fine old violins will be discovered there. Their knowledge is perhaps based upon books, and, guided by such knowledge, they may be imposed upon, and induced to buy fiddles specially prepared for their purchase at high prices.

Such, as a rule, prove to be of little worth. One must have real practical knowledge, which cannot be learned from books. Only personal experience of many years spent in handling and playing all classes of instruments would suffice.

### **Judging Old Violins.**

When judging an old violin, it must be examined from three points of view, that of the player as regards tone, that of the dealer as regards authenticity, fashion and resultant price, and that of the collector or purchaser.

The first consideration is the most important. After all, violins are intended to be played upon, not simply to be looked at, the ultimate object being the production of beautiful sounds. The player, therefore, should have the first and foremost opin-

ion, and he is justified in judging a fiddle entirely upon the merits of its tone. The dealer considers tone a variable factor, as it depends upon personal taste. No two players have exactly the same standard of tone. The dealer, in judging the value of an instrument, takes into consideration its appearance, preservation, age, name and genuineness. To lay down any infallible rules is impossible, and only general points can be placed before the student for his guidance in so intricate a matter. If experts' opinions are often at variance, what can be expected of the novice? In deciding the make and nationality of a violin, the chief points to be noted are, its shape and curves, the lines and angle of the scroll, the button, the purfling, the sound-holes, the model of the body, the varnish, and lastly, the interior linings and blocks.

### **The Old English School.**

From about 1700 to 1800, some genuine British violins were made (Plate XVI). The special characteristics of these can be noticed in the scrolls, which are mostly flat at the sides, the centres of the scrolls not projecting on either side to any extent. The curves are good, but do not stand out very boldly owing to the shortness of the scroll. The throat (that part where the scroll commences above the A peg) and the sides of the peg-box are thick. The button, which is a hall mark to any fairly good fiddle, is well rounded, heavy, and perfectly level

with the edge of the back plate. (Plate XVII, Fig. 11.) The sound-holes are a very important guide; they are generally of an upright character, long and narrow; the circles top and bottom are small in comparison with other sound-holes. (Plate XVII, Fig. 6). No one particular model was used as a pattern, all the old masters having been used as such. About 1700 it was Amati, in 1750, Stainer, and so on. The varnish varied, being chiefly yellow-brown, but sometimes red. The wood for the front was broad-grained and somewhat soft in the majority of cases. The linings were heavy and rather roughly finished off. Finally, the purfling is noticeably of a white appearance, but many makers did not use it, substituting ink markings. The tone generally was good, rather muffled in character, but of sweet quality.

After 1800, cheap violins of German and French manufacture killed what pure violin making was carried on in Britain. British makers were unable to compete in price with these foreign copies.

### **The Old German School.**

The early German makers had some originality, the high model of Stainer finding great favour. But though this model specially interested them, its popularity was not lasting. Scrolls of the German school generally have a certain flatness on the face, position being out of line with the neck and too far forward in the first place, the maker remedying this

defect by subsequently cutting part of the curve away. The buttons are raised and pointed, many also being square in shape and small in proportion. Some of the buttons of these makers incline at a very sharp angle from the back (Plate XVII, Figs. 9 and 10). This question of buttons is an important one in judging the make of an instrument. Some violins lose their original buttons when re-necked. This loss very much lowers the value of the instrument, from a dealer's point of view. German sound-holes are of many kinds and lack good and sharp finish; sometimes they are very short and not in proportion with each other (Plate XVII, Figs. 4 and 5). The purfling leaves much to be desired, and shows marked inferiority, owing to wear and poor wood. The linings and interior blocks are unfinished, and in some specimens omitted altogether; they are narrow and squarely set. The varnish is generally brown, the breasts of fine wood, but of too hard a grain, tending to give the piercing quality of tone characteristic of old German instruments. The high Stainer model does not at first sight present a clean and sharp outline, but is inclined to squareness and crudeness. For fine tone, the best in the German school are a genuine Stainer or a good Klotz, when obtainable (Plate XVIII).

■

### **The Old French School.**

The majority of violins by French makers, from 1650 to 1850, are so alike that originality is difficult to find. The scrolls are regular in the lines of the outer edge at the part farthest from the body. If the instrument be placed so as to face one, the straightness of these lines cannot but be observed. The proportions, if viewed sideways, are much better, and the knobs or flutes at the back of the peg-box are clearly cut out. Like those of the German school, the sound-holes show an inclination to shortness, but are rather wide and so clean-cut that they give the impression of being moulded. The models of instruments of date after 1750 are chiefly flat, and convey the impression of having been turned out like lozenges with sharp and precise finish. Varnish does not seem to have been taken sufficiently into account by the makers, and a desire to give an old and worn aspect is very noticeable. The colouring is often good, and of a deep red, yellow-red, amber, or a very dark brown. The wood used is of a soft quality and straight in the grain. Care is displayed in the fine finish given to the interior blocks and linings. Noteworthy also are the accuracy and skilful work devoted to the artistic purfling. This later school has produced a large number of instruments which are in many respects preferable to those of the German makers. The buttons are quite semicircular, and in later makers are sometimes nicked in at the base of the sides. (Plate XIX.)

### The Old Italian School.

We now have to deal with the most famous of all schools, the one from which the copyist takes his models and to which the fiddle forger devotes his skill. The school can scarcely be regarded as one, as it includes quite a number, such as the Neapolitan, Venetian, Cremonese and Florentine. The characteristics of these violins have much in common. The scrolls take first place, as they positively stamp the real Italian masters' instruments. Although varying in appearance, there is a distinctive gracefulness which cannot but be noticed by any who have seen or played on good old Italian fiddles. The scrolls are slender and the throat thin; they are long and well curved from the peg-box. They can, perhaps, be described as "thrown forward" or projecting, but although they have this appearance, they are actually in strict conformity with the neck (Plate XX of scrolls). The buttons are of various patterns, some being slightly raised, others higher and more rounded (Plate XVII, Figs. 7, 8, 12). To describe the sound-holes would take up too much space, but a few guiding remarks may be given. About 1600 the prominent feature was a leaning forward of a naturally shaped /, having sharp points at the top and bottom. Fifty years later a development in boldness and greater circumference in the top and bottom holes may be observed. In 1730 they became quite typical of the Italian shape and curve. A

careful study of these three periods will give a very good knowledge of the appearance of the sound-holes of the Italian makers (Plate XVII, Figs. 1, 2, 3).

Imitations of models abound in every school, therefore shape or model alone is not a trustworthy guide to the amateur. A shallow depth in the ribs is held by many to denote the Italian fiddle, but this also is not a certain guide. Violins of other schools have been cut down, while some Italian ones, on the other hand, have deep ribs. The grain of the wood is always of a hard quality, but age mellows the tone. Purfling varies in the manner of setting and is rather embedded, some examples being irregular; on the other hand, others show most perfect workmanship. The corner blocks and linings are small and neatly executed but not elaborated in any way. In the finest instruments the linings are let into the corner blocks. We have already had something to say as to the varnish, which is always of soft and thick quality. The Neapolitan is bright red, light yellow or light brown in colour and Florentine is similar. Cremonese is a deep yellow or red, and Venetian a brilliant red. All Italian varnishes may be considered good (Plate XXI).

### **Faked Old Violins.**

Great care should be taken that a fiddle is not *faked*, or in other words, "manufactured old." There is a class of violins known to dealers as





PLATE XXIII.

F. TOURTE.







PLATE XIX.

VIOLIN BY J. B. VUILLAUME.

"Leipzig fiddles." Avoid these. They are generally labelled with some famous Italian maker's name, and have a sooty, lumpy appearance under the bridge and round the sound-holes, intended to give a false impression of age. The tone is harsh and hollow. They are manufactured by cheap mass production methods, the wood being planed flat to the required thickness, then shaped, cut out in quantities, and placed in vats to be boiled soft, and finally subjected to great pressure. The result is that when the instrument is ready for playing, it is in such a condition of artificial seasoning that it naturally cannot improve, as the fibres of the wood are violently warped. After being played for any length of time, such violins will become "scrapy," muffled and squeaky in tone.

### **One Old Violin to Patch up Several.**

A more elaborate forgery is sometimes carried out. The fakers will go so far as to take a genuine fine old violin to pieces and incorporate different parts in a number of inferior instruments, thus completing several from the one genuine instrument. The scroll of a Guarnerius cleverly grafted upon a fairly good instrument which has been faked might easily deceive the inexperienced buyer. There are all grades of skilled fiddle fakers, from those who make it a special art, down to those who produce the common cheap copies. The former are so clever in their workmanship that they can reproduce an exact copy,

duplicating every mark, scratch, or sign of wear, making it very difficult to judge the genuine from the spurious by appearance.

### **Some Methods of Violin Forging.**

Old violins naturally show signs of wear through age. For instance, that portion of the violin back which rests whilst in use upon the player's shoulder, will show more wear than the portion nearest its neck. The varnish, in the course of time, will have worn away, leaving the original colour of the maple or sycamore of which it is made. The faker will product this worn appearance by using, in the first instance, a brass wire brush, which he applies with a tapping motion to the surface of the varnish, thus causing the varnish to drop off, until the smooth, but still darkened, surface of the wood shows up, narrowing naturally towards the neck. Violinist conductors of small orchestras, both past and present, often have a habit of tapping the back of their instrument with the stick of the bow, to call the attention of the other players. This naturally causes marks upon the back of the violin, and such marks are skilfully imitated by the forger. Old instruments are covered with scratches due to many years of use. So these are reproduced by a special instrument, which is laid upon the surface and moved jerkily and intermittently over the back of the violin. From this application a large number of very small holes, scratches, chippings and dents are formed at

irregular places over the varnished surface. To darken and give the appearance of age to the wood, permanganate of potash is used. Bichromate of potash gives a yellow tinge and the effect of worn varnish so noticeable in old Italian fiddles. A frizzled or cracked varnish is secured by the application of gentle and gradual heat. The *belly* or front of the violin has special care given to it. The use of bridges for hundreds of years would give rise to dents and wear on the soft pine wood of which the front is made. So here the varnish is picked carefully away where the feet of the bridge are supposed to have rested under the pressure of the strings for so long. The dull yellow surface of the pine becomes visible below the jagged varnish. This particular operation requires skilful treatment, lest the picking of the wood should betray its newness. Where the chin is supposed to have rested and caused wear on the pretended old violin the desired effect is produced either by rubbing the instrument with very fine glass-paper and Tripoli powder or by the application of the brass brush previously mentioned. The scratching instrument is again brought into play on the front of the faked fiddle to give the needed scratches, chips and dents. The "ribs" are marked in a similar manner. The edges of the "belly" and back, where projecting, are given their worn appearance by judicious rubbing with a fine file or glass-paper. The neck, finger-board and peg-holes also receive due atten-

tion. For the higher price fakes in most cases good modern necks are skilfully fitted, and the peg-holes rebushed or carefully filled in to fit the modern shaped ebony or rosewood pegs. Forged labels present no difficulty to the faker; by means of old paper and type or facsimile printing this part of the deception can be easily accomplished.

### **Sale Room Bargains.**

We often hear of a violin being picked up in an auction room as a bargain. These cases must be taken with reservation. The desirable or valuable violins are ticked off the catalogue by the dealers previous to the sale, so the novice is hardly likely to obtain any special bargain. Many violins purchased at sales are not worth the prices given for them. There is also the difficulty of obtaining a *proper test* or examination beforehand. Then again, runners up are to be found at some auctions. Be sure that any fiddle which resembles an old Italian one will generally fetch a price out of proportion to its worth as regards its tone and state of preservation. To a genuine violin player, the maker's name should not take first place; instruments by lesser-known makers, in appearance may be unsatisfactory, but tone alone should be the mark of worth. Many may possess a fine tone. But even tone is difficult to judge. Violins on show prior to a sale are often not strung up and in playable order, and only an expert could judge tone by appearance.



**Nationality.**

In buying an old fiddle, its nationality need not count for too much. Italian makers, particularly the Neapolitans, have turned out some very poor work. Those able to pay high prices for the work of makers of repute should only do so when they can obtain a written guarantee, signed by a trustworthy firm.

If one is offered a bargain privately, and is unable to resist what appears to be really such, a stipulation for an opinion and valuation should be part of the deal. Failing these precautions, the risk becomes the purchaser's.

**Expert Opinion.**

Experts can be paid for their opinions, but, unfortunately, they are found to differ considerably. Nobody is infallible, and no expert can state with absolute accuracy the make, age, value and genuineness of a violin that may have been used for two hundred years or more, and has no doubt been repaired from time to time. Who can say with confidence that he has the original untampered instrument in his hands? It is obvious that in many cases the cleverest expert can only make a guess at the origin of a violin.

**The Teacher as a Guide in Selection.**

If a good and experienced judge is not available to choose a violin, the next best friend is the teacher. He should know the pupil's requirements, and may

be able to recommend a reliable dealer. Many people object to this assistance, as they imagine the teacher will make a considerable commission from the transaction. This is quite a fallacy; no right-minded teacher would wish to make a large profit from the sale of a violin. Very often, on the contrary, the teacher saves the pupil's money by choosing for him. In any case, if he has experience and judgment and devotes time to others' interests, and a small charge is made by way of commission to cover that time and trouble, the pupil should be only too pleased to pay it, as probably, by purchasing himself he would in the end be many times this amount out of pocket. Again, the pupil should remember that the teacher is likely to have the violin played in his own hearing and so would naturally select the best instrument to be procured for the money.

### **Tubby Tone.**

In choosing a violin, avoid one that is very deep in the ribs, as such do not as a rule possess good tone. They are generally *roarers*, though exception must be made in the case of some of the older makers, the genuine Stainers in particular. His violins are remarkable for their arching which is so high at the centre of the belly that if the violin is held horizontally one can see through both holes. Yet in this case the tone is rich and of a remarkable silvery purity of sweetness; but these violins have

not the fullness of a Guarnerius, or the breadth and power of a Stradivarius. The power of the tone produced depends upon the amount of air enclosed in the violin itself, and the general form of the instrument as well as on the shape of the sound-holes. Loudness does not interfere with mellowness; in fact, power with mellowness is the ideal combination. The tubby toned fiddle is unsatisfactory in carrying power; it is hollow sounding under the player's ear but much of the power is internal. Another cause of tubby tone is undue thinness of the back of a fiddle. This fault may be remedied by lining the back with a thin layer of sycamore, or by removing the belly and fitting a deeper bass bar, but on the whole this class of violin had better be avoided.

### **Test for Tubbiness.**

In modern well made instruments tubbiness is seldom found, but when it is, the two reasons are as already stated, thinness of wood in the back, or too great an arching from the back to the belly. An old and reliable test for the latter is to measure the depth of the ribs with a penny; the coin should just fit in between the overhanging edges of the back and belly, as the depth of the ribs of a well proportioned violin is the exact diameter of a penny. At the upper bouts the depth decreases so as to be a little too small to allow of the coin fitting right in. Fairly flat models very often suffer from tubby tone,

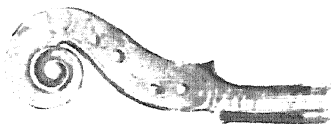
but when such is the case, the tone is also hard and thin. Good tone depends largely on the curves of both back and front. A violin should be held up sideways and the relative rise in both back and belly carefully noticed; if the back curve is greater than that of the belly, the tone will not be quite satisfactory. A general rule regarding these respective curves is that the back should be always a trifle flatter than, or at most equal to, the front curve.

### **Aids in Forming a Good Judgment.**

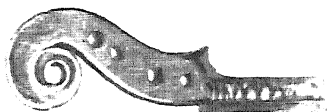
Take the opportunity of seeing, hearing and handling as many violins as possible, and note their appearance, the shape and size of the sound-holes, the varnish with which they are covered, and the tone they produce on every string and in every position. A really good fiddle should be equal on every string, and responsive in all positions. Many violins vary in tone on certain strings; some have powerful G strings and a weak A, others a thin D or harsh piercing E. If the note G on the D string is clear and full, the instrument will generally be equal on the other strings. B flat on the second string and A sharp on the third are very unsatisfactory on most fiddles. (1) Violins should not be tested in empty rooms or halls; an instrument will generally sound well if played under these conditions, where plenty of resonance is imparted. (2) Good instruments carry in tone, and have a peculiar penetrating power, so that the softest notes can be heard at a



STRADIVARI,  
1710



NICCOLÒ AMATI.



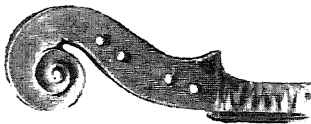
STRADIVARI,  
1698



GIUSEPPE GUARNERI,  
*Violon du Diable.*



STRADIVARI,  
1709.  
(*LA PUCELLE*)



GIUSEPPE GUARNERI,  
1735



STRADIVARI,  
1710.  
(*LE MESSIER*)

PLATE XX.  
SPECIMENS OF SCROLLS.  
(G. Hart's "The Violin.")



great distance. (3) The expensive violin should be tested under all conditions before purchase, even in a small room crowded with furniture where loudness and weakness of tone will be distinctly heard.

Another factor which will assist in forming a judgment is that an inferior violin will not bear pressure to any great extent; it will grate and squeak, especially if chords or quick runs are played. On the other hand a good instrument will stand any reasonable amount of pressure on the strings.

If you would become your own expert observe in all instruments, the build or model, the label, state of preservation, internal and external patchings or repairs. Interior condition can be viewed by a small glass fastened to a pliable handle and inserted in the sound-holes.

### **Old Violins and their Prices.**

Care must be taken in the amount paid for an old violin. The price is often decided only by the purse limit of the buyer and the conscience of the seller, and the latter may be elastic if a good customer can be secured. The finest new instrument should not cost more than about fifteen pounds. For an old one, it is impossible to fix any price within reason. Prices charged up to the staggering sum of two thousand pounds are no doubt due to special scarcity and unique quality of instruments of certain

famous makers, which are coveted by dealers and wealthy people.

### **Labels.**

Do not be led away by the label. If the instrument is a new one the label, as a rule, only indicates that the shape of the violin has been modelled after that of some celebrated maker of the seventeenth century. Copy labels can be obtained in printed sheets.

Labels are sometimes copied from printed title pages of ancient books; it can therefore be seen how difficult it becomes to determine whether certain labels in old violins are genuine. Even the genuine vary in their spelling and dates and some were not dated. The very few genuine labelled instruments of Gasparo di Salo and Gio. Paolo Maggini are undated, and it is very doubtful whether any authentic dated label of that very early century in the history of the violin was ever placed by its maker in the instrument as we know it. Forgery and deceit have been practised in connection with violins for the last two hundred years and they are extremely difficult to detect, as so much of it happened long ago. After each great master became famous, other makers preyed upon his name and reputation. It has been stated that even some of the great masters themselves used the names of others, before their own



fame was established. Astounding as it may seem, many of the genuine violins of Stradivari and Guarnerius have spurious tickets.

Genuine Guarnerius labels were supposed to be coarsely executed, being roughly engraved on wood blocks; many of the spurious tickets are mostly printed from clear type on dull paper.

A very good work by Paul de Wit on violin labels has proved extremely useful. It consists of some four hundred examples with descriptions. Many genuine instruments were opened and their labels photographed in the production of this book. It is from these that variations in spelling can be seen. On the Cremona labels the orthography of the town differs in its meaning. The Latin word terminates in various ways :

"Cremone" (*of Cremona*),

"Cremonae" (*at Cremona or of Cremona*),

"Cremona" (*in Cremona*),

"Cremonensis" (*belonging to Cremona*).

Many of the Italian makers used either Italian or Latin in their labels at different periods.

Although varied spelling may cause some doubt regarding a label it would be unwise to base an opinion as to its authenticity on this point alone. Even in the spelling of their own names many of the old makers varied, for example, "David Tecchler Liutaro fecit Romae Anno 1703," and some years later "David Dechler fecit Rom 1710," and again Alessandri Gagliano Alomnus Stradivarius fecit

Napoli anno 1701," and Alexander Galiani fecit Neapoli 17—. We find similar instances in our own country of the varied spelling of proper names. Two letters in Italian written by Stradivarius show him to have been a somewhat indifferent scholar. (Plate XXII, Labels).

### **Stainer Forgeries.**

The opportunity of obtaining a genuine Stainer is rare. Stainer's own pupils brought their work on the market using a label like his, and their unfortunate example has since been followed by many other makers. There is even some doubt whether Stainer himself used printed labels, as according to good authority the genuine labels were written by hand. Bergonzi and other old makers merely inserted printed labels in the instruments they repaired. De Wit, in his book, gives a copy of one of these by Bergonzi. It is enclosed by an ornamental border and reads: "Anno 17 Revisto e corretto da me Carlo Bergonzi in Cremona."

Labels will often be found in old violins beginning with the words: "Revisto e corretto da me," and followed by the repairer's name. Through incorrect deciphering the word "Revisto" was taken by an old authority to be "Renisto," and supposed to be the name of a maker. Curiously enough, this error appears to have persisted up to the present day.

The great Stradivarius and Guarnerius do not

appear to have suffered quite so much as their less celebrated contemporaries in this matter of labels. The trouble with the former masters' violins was the continual alteration of dates by clever manipulators.

The usual, because the most convenient, position of the label is near the sound-hole on the bass bar side of the instrument, where it can easily be seen, but it is satisfactory to observe that a few makers are now placing their labels in an out-of-the-way position. One maker, not content with his label, places a specially cut mark in a hidden part of his instruments. Another writes his name in Indian ink in large characters across the back upon the bare wood.

It is not uncommon for a repairer to find two or three labels in one fiddle, one pasted over the other.

### **Slight Defects.**

Many fiddles which do not give out a bad tone may nevertheless be faulty, even if old. In such a case the violin can be set right by a good repairer. Should it be a permanent defect in the general make, however, it is best to avoid the instrument.

Sometimes an instrument will vary in tone and sound unsatisfactory at times only. There may be two or three reasons for this, and a too hasty conclusion should not be come to. Violins, like people, may be sensitive and suffer from temporary troubles which pass off under favourable climatic conditions. Do not tamper with them or try experiments with new bridges, sound-posts or even bass bars. Many

of the faults heard in violins are due to weather conditions, or to change of place; an instrument usually kept in one room at an even temperature is perhaps moved to another. When such is the case, all the adjusting in the world will not mend matters, so do not listen to advisers who suggest a variety of alterations, wait and see, and the violin may right itself. Should it happen that the tone is unsatisfactory even if the violin is well fitted with a suitable solid pine sound-post, a well seasoned bridge, of correct height and thickness, and correctly gauged strings, no adjustment will improve the tone. Rare old instruments are so sensitive to alterations that they resent any interference for days.

### **Renecking.**

Many old violins have to be renecked when a new bass bar is inserted. This is necessary to increase the pressure on the breast and allow greater facility in playing in the higher positions. This operation is one which requires skill and should only be entrusted to a good repairer.

### **The Fingerboard.**

The fingerboard should always be of ebony, exactly true in its curve and perfectly smooth. When it becomes indented by the fingers from constant playing it can be planed down by a violin fitter. This process is technically known as shooting the fingerboard.

### The Old Masters' Secret.

Why are good old violins so sought after? And what is the secret of their fine tone? You are told by many modern makers that there is no secret. The models of the old masters have been copied so exactly that they can hardly be distinguished in appearance from originals. Genuine instruments have at various periods been taken to pieces and minutely examined in every possible way. Measurements of all the parts have been taken. Still the modern violins do not possess the real Cremona tone. Why? Is the answer to the question found in the fact that the old masters went out into their native forests and chose their wood with great care?

Stainer, it is said, would go into the Tyrolese mountains and pick out the trees, the wood of which he wished to use for his violins—usually such trees as had already begun to die off at the top; further, before any tree was felled he would tap with a hammer against the trunk and decide upon his selection by the sound. Do our modern makers choose their own wood, or is it purchased wholesale from the merchant? We are strongly inclined to think that the solution to the secret lies in the choice of the wood.

■

## CHAPTER V.

### THE BOW.

#### **Evolution of the Bow.**

**I**N dealing with the subject of violin construction we must not omit to give a brief outline of the development of the bow. It is of course possible to play with any substitute for a bow, provided that the strings are set in vibration, but the violin bow of to-day is the evolutionary product of the long past. If we examine the pictures on ancient Greek vases we find figures depicted performing on stringed instruments, but with bows differing greatly from those of our modern type. Hair stretched upon the bow as we now know and use it was doubtless not then in use. It is said that on one occasion Paganini played with a thin rush in place of the usual bow, the result being fairly satisfactory.

Up to the year 1650 violin bows were very crude and clumsy; more like modern arched double bass bows, but without satisfactory appliances for keeping the hair flat and altering the tension.

In its primitive form the name was very appropriate, as the bow was in reality arched or bow shaped. The bent stick was kept in its curve by a string or piece of gut fastened from end to end. During the thirteenth century some attempt at forming a nut and head was made, thus suggesting that even at this early period hair was used. At a later date further improvements were made, the too pronounced curve being diminished and the nut becoming a separate piece attached to the bow by wire or gut. The pull of the hair could also be governed by the fixing of grooved pieces of metal on the stick.

### Corelli.

Corelli, in the seventeenth century used a bow of the kind just described. How fine nuances of expression and speed were attained it is difficult to understand; but it must be taken into consideration that the style of playing at that period did not require such fineness of polish as would be expected now. Players of Corelli's period were quite satisfied with playing a passage first *piano* and then *forte*.

### Tartini.

The next improvement was brought about in 1740 by Tartini, whose genius would not rest satisfied with the old formal style of expression. He found the production of expression depended to a great extent on the magic wand, the bow. In his improved bow toothed metal was replaced by a screw for adjusting the tension of the hair. The bow was

thinner, longer, more elastic and the curve of the stick was so changed that it became almost straight as we now know it; the curve was backwards instead of forwards. It was made of light wood and the part of the stick held by the hand in playing was grooved.

### **Old Bows (Tourte).**

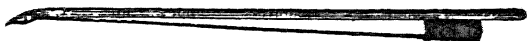
Unlike an old violin, an old bow has no special value. On the contrary the modern bow is far superior. Corelli and Tartini were pioneers in the search for an improved form; but the man who produced the perfected article was François Tourte, born at Paris in 1747 (Plate XXIII). He was originally a watch maker, but as violin playing was making great strides and artists were endeavouring to obtain the finest shades of expression, Tourte's attention was drawn to the manufacture of bows which were then in great demand. His first attempts were somewhat crude, and we read that they were made from the wood of sugar barrels, and sold at about a franc each. After many experiments, he decided that the most satisfactory wood for their manufacture was Brazil, as it contained the necessary properties of lightness, firmness and elasticity. These discoveries were made between the years 1775 and 1780. At about this period there was a great scarcity of Brazil wood, and as a result Tourte's bows were very expensive, ranging from thirty shillings up to three pounds.



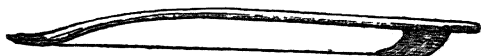
*Mersenne, 1620.*



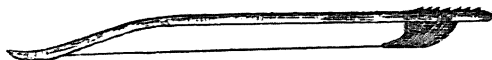
*Kircher, 1640.*



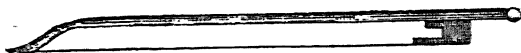
*Castrovillari, 1660.*



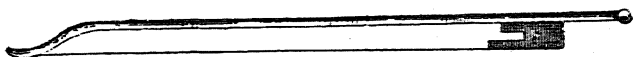
*Bassani, 1680.*



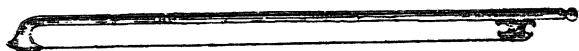
*Corelli, 1700.*



*Tartani 1740.*



*Cramer, 1770.*



*Vioti, 1790.*

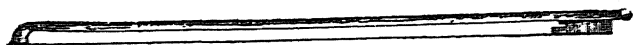


PLATE XXIV.

THE EVOLUTION OF THE BOW.

### **Inward Curve of the Bow.**

A glance at the accompanying illustration showing different periods and developments will give a very good idea of the progress of the bow (Plate XXIV). Tourte, by making the bow curve inwards found it was possible to get greater strength. He also fixed the length of the stick and so constructed it that the position of the centre of gravity renders the bow capable of being easily balanced. His bows now realise very high prices—from six pounds to ten pounds. Modern makers do not appear to have excelled him. Tourte died in Paris in 1835. Another famous maker was François Lupot, born at Orleans in 1774 and who died in Paris two years after Tourte; he was brother to the famous Nicholas Lupot, the well known violin maker.

### **John Dodd.**

Other makers of great eminence were the Englishmen, John and Edward Dodd, the former, born in 1752, died in great poverty in 1839 in Richmond workhouse. Edward Dodd lived to the ripe old age of, it is said, one hundred and five years, and died in 1810 in Salisbury Court, Fleet Street, London.

### **Further Well Known Bow Makers.**

Other fine makers of the past were Dominique Peccate, born Mirecourt 1810, died 1874; François Nicholas Voirin, born Mirecourt 1833, died 1885;

and of more modern times Lafleur, Tubbs, Schwartz, J. Henry, P. Simon and G. Chanot, 1851.

### **Bow Construction (Process and Description).**

The bow consists usually of a long stick made chiefly from Brazil wood, and in other cases from snake-wood, iron-wood or log-wood. In length the stick is about twenty-nine inches from the tip to the screw at the end. The triangular part at the point is termed the head, and in this head is a small cavity for the insertion of one end of a knotted hank of horsehair, which is fastened in by a wedge or plug of wood. The flattened surface of the head is usually covered with a piece of ivory, silver or metal called the plaque. At the other extremity of the bow is a small oblong-shaped piece of ebony wood known as the nut. Into this the other end of the hair is fastened in a similar manner. The chief requirements of the nut are that it be correctly formed and carefully finished; it is connected by means of a screw arrangement with the stick, in such a manner that the hair can be regulated to any tension. The hairs, of which there should be sufficient to form a thin flat ribbon without any spaces between the hairs, number roughly about 100 to 250. Viewed under the microscope, it will be seen to consist of a vast number of minute bristles. This it is which causes the strings to vibrate; so when fixing the hairs in a bow, they are laid in alternate directions. By this alternation there is an equal number to cause

vibration by both the down and up strokes of the bow.

### **Qualities of a Bow.**

The quality of a bow depends principally on the character and make of the wood, nut and screw, which, if of good material and workmanship, should result in a fine stick of elasticity, strength, balance and trueness.

The balance applies to the weight of the bow when taken in the hand. This varies in accordance with the difference in the weight of the parts of the bow on either side of the hand; the smaller the amount of this difference, the lighter will the bow feel; but no rule exists by which the correct amount of variation can be ascertained. Tastes so differ that scarcely two performers will be satisfied with the choice of the same bow. The finest bows are cut by hand; in other cases the head is carved and the other part of the stick bent by heat.

A stick of light weight should not be chosen, as it would fail to produce the same tone power as one of medium weight; otherwise extra pressure would have to be used from the first finger, and this would become very fatiguing after several hours' playing. Choose a bow of medium weight. It is the bend or spring, as it is termed, of the bow stick which gives it its main value.

To test this spring, the small screw at the nut should be turned until the stick is parallel with the

hair; then look down the stick and note if it curves to either side. If it remains in a perfect straight line with the tightened hair it will be true. After this, unscrew until the nut screw is just about to leave the stick, when the centre of the latter should come in contact with the middle of the hair. Should there not be sufficient spring in the stick for this, the bow is probably worthless.

### **Weight of a Bow.**

Bows vary in weight, and should be chosen to suit not only the player's hand, but the instrument used. Some will require a heavy, others a lighter bow. No bow should weigh less than two ounces. Before playing never screw the hair up too tightly, it should be so taut as to allow the curve to remain in the stick and yet prevent the rubbing of the latter when in use. It is perhaps hardly necessary to caution the player against exposing the bow to the heat of the fire or the sun. In a good bow the curve of the stick at its centre is within about half an inch from the hair.

### **Secondhand Bows.**

It is perhaps better to purchase a good second-hand bow than a cheap new one, it having stood the test of playing—provided, of course, that it is not worn out. A good bow is quite as necessary as a fine violin, and may be purchased for all-round purposes from about £2 to £3. Messrs. J. Chanut

(Wardour Street, W.), the late Tubbs, Hills (New Bond Street), and E. Withers (Wardour Street) are all reliable makers. It is a great advantage to be able when purchasing to test the bow over the strings, as new ones often reveal faults which cannot be detected by the eye alone.

### **Bow Wrappings.**

New bows are generally wound round with silver thread near the nut; this is to keep the fingers from slipping. It is best to remove this and replace it by a piece of thin calf leather or a small thin piece of indiarubber tubing. The leather can be neatly glued; the tubing can be slipped on by first removing the nut and screw at the end of the bow. This will greatly add to the comfort of the thumb of the right hand. Specially made rubber wraps can be purchased at any large violin shop for a small sum, but they do not seem to be serviceable enough. Some bow makers have introduced a wrapping of whalebone and also of aluminium, certainly an improvement on the old type.

### **Re-hairing Bows.**

A good bow can soon be ruined by a careless repairer. It is necessary that the workman should equalise the tension exerted by each side of the flat ribbon of hair, otherwise a warping of the stick would be the result of a greater strain upon one side than on the other.

Many bows are highly ornamented with gold or

mother-of-pearl inlaid, but unfortunately in many cases more care seems to have been lavished on the ornamentals than on the essentials.

Bows made of hollow steel tubes have been used at various times, but they do not seem to have been very satisfactory or popular.

### **Cleaning and Re-hairing the Bow.**

Another point is that of keeping the bow hair clear. The hair of the bow should not present a shiny appearance, a sure sign that more resin is needed. Sometimes the hair becomes dirty or greasy: if so, it can be carefully washed. The method is as follows:

Get some warm soapy water and a small tooth or nail brush; stand the bow on end, but do not unscrew it; apply the soapy water with the brush, taking care not to wet the stick more than can be helped. After well rubbing, rinse the hair under the cold water tap very thoroughly, then well dry the stick, unscrew the hair, and hang in a dry and clean place until quite dry, or the screw attachment may get wet or rust. When perfectly dry, screw up the hair. Powder a little resin on a sheet of writing paper and then rub into the hair. If any of the hairs break, always be careful to cut them away a slight distance from the nut and point, never pull them out, or other hairs may become loose. All the washing in the world will not make worn-out hairs grip. The necessity of re-hairing, of course, depends upon the amount of use the bow has received; for average

playing, about once a year should be sufficient, as hair wears smooth. A good bow can be ruined by careless re-hairing, therefore be particular to whom you entrust the work. Some re-hair their own bows, but such a proceeding requires considerable experience to complete it satisfactorily. The following is the procedure in re-hairing. Purchase a hank of hair, cost about two shillings, take care when buying that it is horse-hair and of good quality. Place the hair in clean water until thoroughly soaked through. To remove the old hair from the bow, the ferrule at the nut of the bow can be prised off with a knife, and the little wedge of wood which tightens the hair removed, as well as another wedge from inside the box of the nut. To remove the other end of the hair at the point of the bow, force out the wooden wedge under the hair. The old hair being removed, take the well-soaked new hair and insert the tied end in the socket at the point caused by the removal of the wedge. Now comes the difficulty of obtaining an even surface of hair. Having inserted the end as directed, slip the metal ferrule on to the hair, fasten the head of the bow so that it does not slip, and with a fine comb, comb the hair out as evenly as possible, keeping the hair in position by grasping it between the fingers behind the comb, so that no hairs cross each other, or are of unequal tightness. When the amount of hair required to reach the nut has been measured, it should be fixed with a broad clip to keep it in position temporarily; the hair on



the lower side of the clip should then be tied with fine and strong twine, and the ends of the hair fused with a hot piece of wire, causing them to swell. The tied end is then inserted in the nut-box of the bow, and the wooden wedge is replaced, while the lid of the nut-box is slid in, and the metal ferrule, which has remained loose on the hair, is replaced. Care has to be taken to spread the hair as broadly and evenly as the width of the ferrule allows. Replace the other wedge tightly, and leave the bow for a few hours before screwing up. If all has been neatly done, the hairs will be broad, close together, and equally stretched. If some hairs are observed to be lying loose when the rest are tight, they will need to be removed by clipping each one off. Nicety in the arrangement of the hair is most readily obtained in the best bows, owing to the fact that their ends are better constructed for exerting a tight hold. No repairer worthy of the name will re-hair a bow with dry hair.

### **The Resin and Care of the Bow.**

After use, the bow should always be slackened, the stick wiped clean of resin and placed in its case. By so doing the spring of the bow is better maintained. The fingers should not touch the hair except at the nut, where the bow is held. Mind not to use too much resin. The quality should be good, and that known as "Hidersine" is excellent. With each packet is supplied material

to keep it from soiling the fingers when being used, and also to cover the resin, as dirty resin means a dirty bow. Good resin for violin playing will be fairly bright, clear, and of a pale amber colour. Many players use a specially prepared resin, which consists of clear melted resin to which hot melted tallow candle is added, in the proportion of twelve to fourteen drops of tallow to about two to three ounces of resin. Both ingredients should be well mixed while in a liquid state, and afterwards allowed to cool and solidify.

■

## PART II.—STUDY AND CARE.

### CHAPTER VI.

#### ON THE STUDY OF THE VIOLIN.

##### **The Manifold Requirements for Violin Playing.**

THE violin is pre-eminent among instruments—in the orchestra, in chamber music, and for solos. It is also one of the most difficult to master, for the player must have not only technical ability but a keen musical ear.

Violin playing makes so many requirements, both mental and mechanical, that its study is one which will only repay the student who gives it serious and unflagging attention. It is not surprising that the efforts of the average player do not reach very great heights. Even those of talent frequently display faults either in execution, phrasing, expression or power. Only when a genius appears do we recognise a perfect blending of all these elements.

Why should the violin present such difficulty? The instrument has to be held in position for play-

ing; notes have to be formed by the fingers on the strings; the ear must be good, so that the notes are played in tune; sound has to be produced by the aid of the bow; every grade of expression devolves chiefly on the use of the bow in its drawing, pressure and speed across the strings. The actions of the two hands are so different that they require the player's attention to be constantly divided between them. Add to this the reading and interpretation of the music, and we can see how exacting this instrument is.

There is yet another point of difficulty to be considered, especially with beginners, and that is the almost impossibility of watching the finger-work while playing. The piano student can see the action of his fingers, and, provided he is not tone deaf, can readily recognise and correct a wrong note; his eye will tell him, even though his ear may fail.

### **A Good Ear.**

The most important point of all is that of pure intonation. This cannot be emphasised too strongly. It is therefore advisable to have a slight knowledge of singing, which will materially aid in producing correct intonation. Should the ear be so faulty that it is unable to perceive the slightest variations in pitch, it would be better to give up all thought of studying the violin and to take up a keyed instrument, such as the organ or piano, instead. On the other hand, the beginner who pos-

sesses a good ear, and is able to detect instantly when he is playing out of tune, should be encouraged by the knowledge that he possesses the most important of the requisites that go to the making of a good violinist.

### **The Standard of a Violinist.**

The worth of a violinist is judged from his intonation, quality of tone and technique.

Quality of tone, of course, depends largely on the artistic make, age and build of the instrument used. Violins can be purchased at prices ranging from twenty shillings to fabulous amounts, but even a costly gem will produce but poor tone in the hands of a beginner or indifferent student. As someone has said, "The man behind the gun counts for more than the gun itself." No two good players will produce the same quality of tone from an instrument. To place a fine instrument in the hands of a beginner would be sacrilege. It is therefore advisable to start with a tuneful but inexpensive instrument.

The bow is the violinist's magic wand, for upon its flexibility, speed and pressure depend beauty, spirit and variety of subtle shading. Bowing must be the perpetual study of every violinist.

### **Accuracy of the Left Hand.**

It must be remembered that accuracy of intonation depends upon the left hand, and an idea of the necessary precision may be formed when we realise

that placing the finger a twentieth of an inch out (sometimes even less in the highest treble) will produce a faulty note. A. Lavignac, one of the professors at the Paris Conservatoire, says in his work on "Musical Education" that: "This is not in the least an exaggeration; it explains why artists who play with rigorously pure intonation are so rare; moreover pressure (from the left hand) has to be made with a certain strength, without which the tones lack cleanness; and, as stringed instruments are very often called upon to execute passages of extreme rapidity, very great agility is indispensable in addition. The qualities required of the left hand, therefore, are strength, precision, skill and agility."

### **The Command of the Bow.**

Speaking of the use of the bow, Lavignac continues: "The right hand holds the bow; upon it principally depends everything pertaining to expression, the greater or less intensity of the tones, the most energetic as well as the most tender, or most passionate nuances, the most subtle inflections or accents, as delicate as, and even more varied than, those of the human voice, brilliancy and dash, heat, warmth and breadth."

Dealing with the difficulties of the right and left hands, he says: "According as the point, the middle or the nut of the bow is used, according as it is held level or inclined more or less to the side, according as the string is attacked near the bridge or the finger-

board, even over the finger-board, according to the various kinds of bowings, whether up or down (the principal of which are known by the following French names: *lié* or *coulé*, the *grand détaché*, the *détaché sec*, or *martelé*, the *sautillé*, the *jeté*, the *staccato*, etc.) the use of the bow is a whole art in itself. We must therefore demand of the right hand incomparable suppleness, accompanied by extreme lightness and the greatest vigour.

"The two hands, each on its own account and by different means, join in producing beauty and variety of tone. Their perfect agreement produces the balance of the whole, and the perfection of the execution, the difficulty of which is so great that no one would dare to attempt it (for it seems almost unattainable when we analyse it closely) without the encouraging example of the considerable number of players who have been able to conquer it by persistent effort. Ease of playing is also very soon assisted by a peculiar instinct, by which the pupil is no longer conscious of the prodigies of skill he is performing every moment."

### **Age to Commence.**

What is the best age to commence the study of the violin? No great results can be obtained unless study is commenced when young. Some children are by nature more favoured than others with those special requirements so necessary for becoming gifted violinists. But almost all children have a

musical ear, and with careful training they should be able so to cultivate it that no difficulty is found in playing in tune. Even the most unmusical ear can in older students be greatly improved by careful training. Perhaps no case is hopeless if taken in its earlier stage.

Ear training should consist chiefly of recognising :

1. Various pitches.
2. All kinds of intervals.
3. Major, minor and chromatic scales.
4. Concords and discords.
5. Simple chords and arpeggios.

If a child is found to possess an aptitude for music, and his parents wish him to become a violinist, he should begin young when the muscles are pliable and can be trained to the flexibility which a capable violinist must possess. A good age is between seven and ten years, and in some cases a year or so later, as the muscles are then soft, the joints flexible, and the body becomes "set," as the term is, to the instrument. The setting consists in the conformity of the left shoulder, arm, wrist and collar-bone to the violin, and with the right arm, shoulder, elbow and wrist adapted to the correct use of the bow. After a certain age the muscles of the body set, and only mediocre results can be attained. One important matter, very often overlooked, is the physical condition of the prospective student, as so much depends on the build and condition of the body. Many who are naturally weak find a diffi-



culty in keeping themselves perfectly upright. How much more difficult will it be for them to hold and use the violin and bow correctly! The chest is perhaps weak, and too long application to practising will only cause injurious results. When commencing quite young, students should not be kept too long at the instrument without a rest; the practice should be divided into small sections, and as a protection to the chest, some outdoor exercise should be undertaken.

Among the other requirements mentioned was rhythm, or the sense of time. We all possess this, but many of us are unable to govern it adequately, owing to temperament. In the performance of music ill-regulated excitement or nervousness is fatal to correct time. Unfortunately, many good players are sometimes at the mercy of their nerves. It is impossible to play well without a sense of tune and a sense of time. Some are naturally gifted with these; from this class rise the born musicians. But the student need not despair, for the sense of time may be cultivated, as also the sense of hearing.

Young children who begin the study of the violin as a rule require a lot of stimulus, particularly after the novelty of the early lessons has begun to wear off. Presents promised by parents are not good; they are too much like bribes, and lasting progress does not always result. A child should not be forced to practise for too long a period, nor its understanding over-taxed, the instruction being gradual,

leading up from the simple to more difficult things. One of the teacher's chief objects should be to interest the student, without tiring him, and at the same time to lead him by easy stages to an appreciation of all that is elevating and artistic. It is also advisable to have the practice supervised by one of their elders. Children differ in temperament, ability and opportunity. In speaking of the child's study of music, the opportunity may be taken to repeat what has already been said elsewhere with regard to the forcing of musical education on children who have no love for, or even a dislike of it. No words are strong enough to condemn this evil.

### Choice of a Teacher.

The ideal teacher is one who teaches with heart and brain, who has tested many methods and systems, gained experience through his mistakes and in his search after knowledge, who has had numbers of pupils, and has thereby obtained a knowledge of various temperaments and how to treat them. Such a teacher's pupils are on the highroad to success, and he is a *rara avis* to be honoured and respected. A tutor should be regarded as a guide, but he should also be treated and looked upon as a friend. Implicit faith should be placed in his system and instruction, and in after life homage should always be paid to the one who has been the means to the end.

**Self-instruction.**

Many have asked whether it is possible to teach oneself. This question usually comes from those of humble rank in life, who cannot afford capable instruction. Let us answer it as fairly as possible. To the genius all things are possible, but even genius requires guidance to reach perfection. Some of the world's greatest men have been self-taught, and there is a true saying that "It is never too late to learn." But just as a person may, with steady application, learn to read a language by the aid of books alone, he must hear it spoken before he can acquire a complete mastery. So the self-taught, who are so situated that lessons are impossible, should take every opportunity of seeing and hearing good players, whether soloists or orchestral players, and of watching the style of fingering, the command of the bow, the position of the violin, and the use of the bowing arm. With careful observation a great deal can be learnt in this way. It is one of the objects of the present work to assist those who are unable to receive competent lessons, but it must not be thought that self-tuition is advocated. All things must be seen to be understood, and it will be the endeavour of that portion of the book dealing with "Technique" to explain how they are accomplished. All desire for knowledge must come from within, and the teacher's duty is to show by example how such knowledge can best be acquired, difficulties mas-

tered, and bad methods prevented. The correct production of tone and technique can never be certain without instruction, and one of the great drawbacks to self-tuition is that some players cannot correctly judge their own executive powers. They require the confirmation of other minds to guide them.

In music, the quality of tone and the manner of production are of great importance. Tone drawn from a stringed instrument, although satisfactory to the performer, may make a very different impression on the listener. Tone depends on bowing, exact fingering and correct positions of the hands and fingers; therefore good instruction is absolutely necessary if good tone is to be produced. The self-taught student is very often quite at sea on many essential points, and falls into bad habits, which become so deeply rooted, that even a good master would be unable to cure them.

### **Class Instruction.**

Class instruction is sometimes advocated as a cheaper means of tuition. This may be very helpful provided the class does not consist of too great a number of students, and is under the supervision of a capable and experienced instructor, and the attendance be regular. The trouble with all classes is attendance; many miss several lessons, others come late, the result being that intelligent pupils have to wait while dullards are being helped over bowing or fingering diffi-

culties. Classes to be cheap must be large, and the time allowed for the lesson cannot in many cases be of sufficient length to give each student individual instruction, so that the class can intelligently comprehend the teacher's meaning. Such a class to be of any practical use, should not consist of more than six or eight students, and the lesson should be of quite one hour's duration. All classes should be made into as many equalised grades of different standards of difficulty as possible, thus facilitating an equal rate of progress for the members of each grade.

The formation and growth of violin classes in many of our English schools is most encouraging, and affords an opportunity to the poor and lower middle class community to make an acquaintance with the instrument, which would not perhaps be possible for them otherwise. When talent is discovered by this means, the parents should at once place the boy or girl under private instruction. As already remarked, beginners' classes are excellent as an introduction to the violin, but as means of acquiring real mastery and a true foundation of sound technique, they leave much to be desired. One serious private lesson, given by a competent professor, is equivalent to at least six class lessons of this character, so that in the end there is not such a great saving in fees through the class method as there appears to be.

There are of course great benefits to be obtained

from advanced class playing. It gives confidence to the pupil, and is useful in disciplining his sense of time.

### **Taking Lessons.**

The next question to be considered is how lessons should be taken. Undoubtedly, regularly once a week, or better still, twice. Regularity in attendance is absolutely essential for progress. Great attention should be paid to faults pointed out and illustrated by the teacher, and bars in special exercises which present difficulty should be marked, so that they can be played separately until mastered. The work given in each lesson should be practised, so that the teacher shall not be compelled to make it the subject of another lesson, to the exclusion of fresh work. Remember that the early lessons are of vast importance, and slight habits contracted through carelessness in standing, holding the violin, bowing or fingering, will increase at such a rate that if care is not taken they may become difficult to eradicate. Confidence should be placed in the teacher, and he should make that confidence mutual. A pupil should not be too nervous to ask for an explanation again, or even two or three times more if the point is not clearly understood. Through fear of trying the patience of the tutor, pupils frequently pretend they understand a difficulty when they do not. They should ask questions rather than leave their lesson with confused ideas. If they are unable to

make a mental note, they should ask permission to make a written one. It is most important that learners should concentrate their minds on every detail. With very young pupils this is difficult; their lessons should therefore not be prolonged beyond thirty minutes.

### **Easy Tunes.**

Many beginners judge their progress by the number of little tunes they can play. This is a grave mistake, as easy melodies are not satisfactory tests. Parents often think a child is making excellent progress if he is soon able to play a few well-known airs. It is generally a sign of the opposite case. To become a first-class performer on any instrument, scales and exercises must be diligently and carefully practised. Some so-called methods give tunes after the third or fourth lesson, much to the delight of unmusical parents, but the result is ruinous in the majority of cases. In fact, anybody, after being shown where to place the fingers upon the strings, can "play" in this fashion. Ask any of our great violinists if he mastered the violin in this manner. His answer would provide food for thought.

### **Preparation for a Lesson.**

Before going to a lesson the pupil should examine the violin to see that no strings are broken and that the bow is resined. He should also have all the music to hand, so that no valuable time is lost during the lesson in readjusting strings, etc.

### **Parents' Supervision.**

Parents' supervision and encouragement will go a long way in aiding children in their practice studies. One often overhears the remark, "It is of no use; I cannot get the boy to practise." In such cases one wonders if the parents have done all they could to make music a pleasure instead of a task to him. Both parents should agree as to the treatment and control of the child. We often find young pupils talented, but very lazy. In some instances they are exceedingly bright and intelligent, but cannot be controlled or confined to any particular subject, with the result that it is difficult to get them to practise for any length of time, or to make progress in anything that requires careful attention. The talented ones often require a certain amount of compulsion to practise, if they are physically fit, but care and judgment must be exercised with such children. All cannot be subjected to drastic measures, and to try to force those who are doing their best to do more, is foolish, and results very often in failure.

### **Aptitude for Lessons.**

Just teachers should give lessons for about six months, and then, if results show that the pupil is quite incapable of making any progress, the parents should be informed and lessons discontinued. This is only fair to teacher, pupil and parent.



### **Common and Cheap Instruments.**

Another point for parents to consider is the purchase of a tuneful instrument. Many give their children the commonest and cheapest of violins—instruments which disgust pupil, teacher and listener. The child does not get a fair opportunity under these conditions. Parents should realise that if a fairly good instrument is bought, greater satisfaction will result, and if the child displays no ability, the instrument can be resold and some return obtained for the money spent; whereas they will get practically nothing for a cheap violin if they attempt to resell it. On the other hand, it would be unwise to go to the other extreme and purchase a very expensive instrument. It should be remembered that a good secondhand violin is more advantageous for the pupil's progress than a cheap new one. The latter would probably tend to make the pupil dislike music.

### **Hearing Good Soloists.**

Children should be taken as often as possible to good concerts, both as a training and a reward for their progress and practice

Unfortunately many pupils feel discouraged after a concert, but they must expect the playing of a finished artist to be superior to their own efforts. They should endeavour to imitate first-rate players, no matter how poor and thin, in comparison, their

own performance may be. Success is won only by working at a fixed idea; make that idea your life-work. If talent is present, do not prostitute it for money; perfect it and work for love of the art only. Aim high, and the instrument will take you there; aim low, and it will also take you low—to the Queen's Hall, or to a third-rate jazz band. To reach perfection, if there is such a thing in violin playing, it is essential to devote much time to practice. Do not be disturbed by the remarks which will probably be made about your playing. Difficulties are very apt to be magnified out of all proportion, and the remarks of ignorant persons should be passed over with contempt.

### **Time for Practice.**

A little practice at frequent intervals is of greater benefit than a considerable amount at one time. The beginner, if a child, should not be left alone, but the practice guided by one who knows something about music, if possible. A child does not naturally know how to practise at first, but when he has grasped the principles and knows how to arrange his work, he may be safely left alone. There are many other matters which must receive consideration before a child is allowed to practise alone; health, time for practice and duration, theory, rhythm, ear cultivation, useless straining of the fingers, emotion, nervousness, etc. Some parents let children work as early as possible in the morning.

Too early is not beneficial, for at the beginning of the day the body is not at its full strength. Playing immediately after meals should also be avoided, but this rule is continually ignored by those who should know better. Mid-day, when the pupil is well disposed, is excellent. Practice when tired is bad, as is also practising too much. For older students who have other duties, it is difficult to state any definite time; the matter must be left to their own discretion. However short the practice, it must be done with concentration, interest and reflection; without these, it is better to leave the violin alone. If the practice is sectional, let it be divided during the morning if possible; in the case of school-children this can be done before and after morning school. The time when a pupil should practise must, after all, be ultimately decided by himself; the morning, but not too early, is for many the most beneficial time. The joints of the body are certainly more agile and relaxed then. A definite time or times should be fixed, and it should be a habit always to be punctual. The importance of this point cannot be too strongly emphasised. If the practice is neglected for a day, it will have an injurious effect on the pupil's playing and progress. Practising after school hours, together with home work, is not good. Long study is unsatisfactory; if school work has to be done as well, the brain becomes overtaxed. If no school work is to be prepared, it is a different matter, but, in any case, too

much practice, that is to say, from four to five hours per day, is unwise for young beginners. Straining of the muscles and tendons may result, and it is likely to end in a complete breakdown of health and an utter disgust for the instrument.

### **Method of Practice.**

Practice should always be based upon some method. It should be noted that time expended at practice in continually playing pieces which are well-known and present no difficulty, is wholly wasted. Every exercise, study, or set of scales, ought to be dissected, and those bars or passages which the teacher has marked as unsatisfactory, should be diligently practised apart from the exercise; afterwards they can be played in their correct places in the composition. The teacher's remarks respecting the bowing, fingering, time, position and expression should be carefully borne in mind.

### **Tuning.**

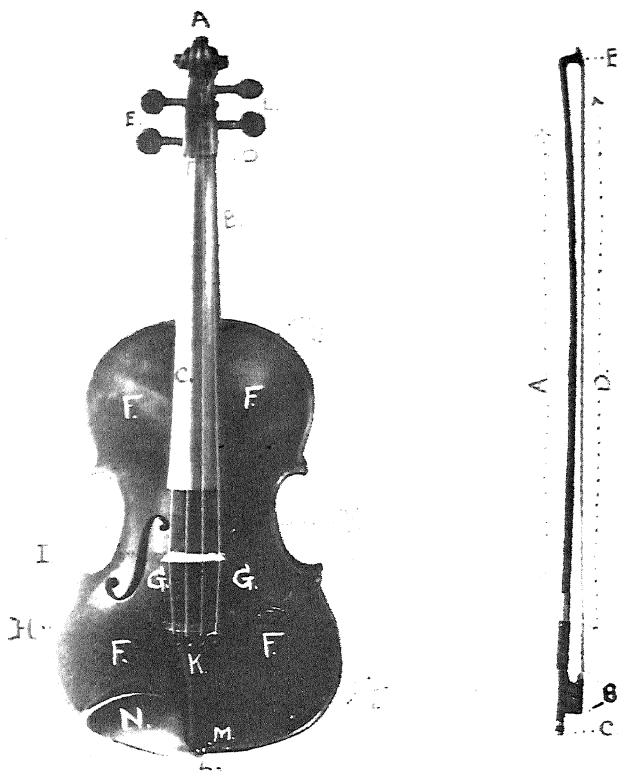
Before commencing, great attention should be given to the perfect tuning of the violin. It is difficult enough to play correctly when the instrument is in tune, but the difficulty is increased threefold if it is imperfectly done. Tuning is not easy. It requires ability and a little experience; therefore it is well for the very young beginner to have his instrument tuned for him at first. There are right and wrong methods for everything, tuning a violin in-

cluded; the chief thing to remember is that the pegs should be so turned as to retain even pressure, otherwise endless slipping and annoyance will result. To press them roughly in their holes deeper and deeper is decidedly wrong. They may then become so locked that any further attempt to tune the string gives great trouble. Here, again, the importance of a good instrument is apparent. With inferior ones, a constant worry is caused by the pegs slipping or becoming locked in their sockets. The reason is plain; cheap violins are made of common wood, and the neck and peg-holes are defective owing to inferior workmanship. The instrument must be in perfect tune or the pupil cannot be expected to play correctly. When tuning, the pegs should not be twisted by violent jerks, but gradually and persuasively. The final adjustment should be made as carefully as a tuner tunes a piano string if the violin is to remain in tune. Jerking the pegs unsettles the strings, and they do not remain in tune for any length of time. If a string is flat, the peg should not be turned backwards, unless it is too stiff to move in the right direction. Pegs which slip can be remedied by the application of dry soap and chalk. Further remarks regarding the adjustment of the pegs will be found in another section of this work. The student will find it necessary to use either an A tuning fork, corresponding to the first A above the middle C of the piano, or a reed pitch-pipe blown by the mouth. The latter is more satisfac-

tory, as it can be held between the lips and sounded continually, while both hands are free to turn the pegs and sound the strings (Plate XI, Fig. 12). The violin is tuned in fifths and the beginner may think it correct to tune to the corresponding notes of the piano; but this would not give perfect tuning, as the piano is not tuned so as to produce perfect fifths, and, apart from this, does not always remain in tune. Unfortunately, many people do not have their pianos tuned more than once a year.

First tune the second or A string to the sound of the pitch-pipe or tuning-fork. If playing with pianoforte accompaniment, the pitch of this string must, of course, be taken from the A of the piano; but the other strings must be tuned independently of the piano. When turning the pegs only as much pressure should be exerted as will prevent their slipping. When the A has been carefully tuned, the instrument should be placed under the chin in position for playing; then, if unable to support the violin straight and horizontally, the student should allow the scroll or head to rest on a table or on his knee. While in this position the bow can be drawn over the A and D strings, the latter being tuned a fifth lower than the A. The ear, with a little practice, will soon recognise perfect fifths; then the G string can be tuned in the same manner with the D. The only real difficulty is in the tuning of the E string with the A string. A good plan is, while holding the neck of the violin in the four fingers and palm of





## PLATE XXVI.

### OUTLINE OF VIOLIN AND BOW WITH DESCRIPTION OF THE VARIOUS PARTS.

THE VIOLIN. A.—Scroll or head. B.—Neck. C.—Finger-board. D.—Finger-board nut. E.—Pegs. F.—Belly. G.—Sound-holes. H.—Ribs. I.—Bridge. J.—Purfling. K.—Tailpiece. L.—Tailgut. M.—Button. N.—Chin-rest.

THE BOW. A.—The stick and spring. B.—The nut. C.—The screw. D.—The hair. E.—The plaque and point.

INTERIOR OF THE VIOLIN. Bass-bar in a line under the breast with the G string. Sound-post round piece of wood placed in an upright position from the breast to the back and placed at the back of the right foot of the bridge.



the left hand, to twitch these two strings with the fleshy part of one of these fingers so as to test their pitch. Twitching the strings with the finger-nails should be avoided, however. With perfectly fitting pegs there is no necessity to rest the head of the violin on a table or the knee. It certainly does not look artistic, but very clumsy. Powerful fingers are required, and it is extremely difficult to get sufficient pressure to turn the E string peg.

Young pupils must learn the sound of the perfect fifths produced by each pair of strings, so that they can be absolutely certain whether their instruments are correctly tuned, not only when actually tuning them, but while playing as well. The A string should be occasionally tested with the fork or pitch pipe, to find whether any perceptible alteration in pitch has occurred. It must be remembered that brilliance of tone depends to a great extent on preservation of pitch. Strings should not be slackened after playing.

The beginner generally finds it difficult to tune correctly, and should no help of any kind be at hand, it is a good plan, after tuning the A string, to follow the advice given by Honeyman: "Draw a temporary line in pencil across the finger-board of the violin at that place where the fourth finger falls—which may be found by running up five notes on one of the strings. Then, after tuning the second string to A, place the little finger firmly upon it at the mark, and the sound given forth should be in perfect unison with the first string, if that string be in tune.

Then place the fourth finger on the third string at the mark, and, when the third string is in tune, it will give a sound in unison with the second; follow the same plan with the fourth, and something like a perfect tuning will be the result." This advice is good, but a student should train his ear by continual tuning until it has become used to the sound of perfect fifths.

Many beginners turn the pegs either too quickly and too far or not far enough. This habit can only be avoided by care and practice. The best method, when a pupil has made some slight progress, is undoubtedly that advocated—to tune while holding the violin in the ordinary way for playing, placing the little finger on the right side of the scroll, and making that member act as a kind of lever by which the first finger and thumb may turn either of the left side pegs. If both the A and E pegs are well fitted and work easily, the left hand may still be used, meanwhile using the bow to sound the strings.

### **Playing Standing or Sitting.**

The question often arises as to whether it is better to play standing or sitting. In an orchestra, the players, of course, must sit, but, on the other hand, the soloist always stands, and all practice should be done standing, as it gives greater freedom. Decide about the correct position, and, once that position is adopted, the body should be kept as still as circumstances will permit. In any case, the feet should

not move, or the bowing may be affected. Some teachers have a very rigid method of ensuring a correct position; they place their pupils so that their backs are against the wall, their shoulders thrown back and standing perfectly upright, with the right foot slightly in advance of the left, the weight of the body resting upon the latter. This very drastic method prevents round shoulders, but unfortunately in some cases it tends to develop a certain stiffness of playing. Sitting or standing, the head must be kept erect, and the chest well expanded. The body must not be swayed, and moving from one foot to the other must be avoided. The position should be an easy and graceful one, and the weight of the body should rest as much as possible on the left foot. The right foot should be placed slightly in advance of the left, so as to form an angle with it. This gives a firm position for the left side and a secure basis for the holding of the violin, which must be held only just tightly enough to ensure easy shifting of the hand into the positions. The left hand should not grasp the neck of the instrument too firmly, or cramp may result. The scroll of the violin should be held so that it is almost at a right angle with the body, sloping neither downward nor upward, but perfectly horizontal. The wrist of the left hand must be bent outwards so as to follow the natural slope of the lower arm, and it must not be brought into contact with the neck or body of the instrument; the left elbow should be well under the

violin, the fingers arched so that the tips only press upon the string. If this position is adopted, the right side of the body is left free and unhampered for the use of the right arm in bowing. The music-stand should be so placed that it is opposite the right breast, and the violin and left hand consequently pointing over its left side. The music should be so placed on the stand that it can be seen without stooping; it should be at such a height that the eyes of the player look at the middle of the top of the page. This subject will be dealt with more fully in a later part of this work, as position is of great importance. A violinist's attitude has a marked influence on his playing, and we can, to some extent, judge his capabilities by noting the position he assumes.

### **The Mirror.**

Before leaving the question of position it will be as well to advise the student to use a method recommended by several eminent professors. The late J. T. Carrodus stated: "It is possible, of course, to practise incorrectly, so that the time is really wasted. Therefore it is always advisable to be well guided and instructed, as many hours of work will thus be saved. It is useful to have a good-sized looking-glass in front of which to practise; it prevents the student getting into careless ways while practising."

For this mirror practice, the glass should be placed in such a position that a side view of the body is

obtainable without shifting the position. Let the glass be placed at the right side, not in front, of the student; if this position is taken, the chin can occasionally be raised from the violin and the head turned for a view in the glass. The angles—not always correct—will be seen, and can easily be corrected. Such angles may be more easily observed while playing long sustained notes, which are invaluable in the formation of a good and graceful style.

Another reason for mirror practice is the prevention of grimaces. There is a true saying that if we could see ourselves as others see us, we should not be flattered. In violin playing, the contortions of the facial muscles produce most grotesque expressions. The mirror will assist in checking this habit.

### **Position for Sitting.**

If it is necessary to sit while practising, the player should use a chair with a fairly high seat. His legs must not be crossed, or a habit of leaning forward contracted. Both feet should be firmly placed upon the floor, and the shoulder blades so brought backwards that they press equally on the back of the chair.

### **The Fingers.**

Students should avoid glancing at their fingers more than is necessary. This is perhaps not such a common fault among violin students as among pian-

ists, as there is not much opportunity to watch the fingers. The correct method of fingering must be adhered to, for the rules of fingering have been drawn up on purpose to lessen the difficulties of playing. The correct way is not always the easiest at first, but it will prove so in the end.

### Scale and Arpeggio Practice.

We have spoken of method, which is necessary to the making of a good player. The first part of the practice should be devoted to scales and arpeggios, which are the foundation of musicianship.

It is a generally admitted fact that regular scale practice on any instrument gives the performer a command of technique and finish which could not be attained by any other means; and a systematically arranged practice of scales trebles their value. They also assist correctness of intonation, especially if the student is gifted with a quick ear. They should be practised, at first with long slow sustained bows, both *forte* and *piano*, *crescendo* and *diminuendo*. Such practice is of the greatest importance, but it is astonishing to find how many advanced students and players neglect scales as purely mechanical drudgery, the place of which can be taken by exercises. But whereas exercises are chiefly for the fingers and time, scales are for the cultivation of speed. They should be played slowly at first, but later, when greater familiarity is attained, all speeds and bowings should be used.

Continuous loud scale practice is an annoyance to others, and pupils should guard against this habit. Beginners are also liable to play scales quicker than they can really manage. The more care taken, the more benefit is obtained in this branch of violin study. Every note should receive its full value, and a scale should be repeated not only once, but a number of times. If the student can play some scales more easily than others, their repetition can be curtailed accordingly, so as not to waste valuable time. The order of the keys should be methodical: sharp keys one day, followed by relative minors the next; flat keys, chromatic scales and arpeggios, likewise. Many go to extremes and over-exert themselves; this should be avoided. It is possible, of course, to dispense, to a certain extent, with exercises, but a too mechanical style of playing may result. At least forty-five minutes of every two hours' practice should be devoted to scales and arpeggios. A strict rule to be observed in playing both scales and exercises, is that as many fingers as possible must be kept down upon the strings until they are obliged to be raised.

Scales should be practised until they can be played from memory, so that a pupil is more free to criticise his position, bowing, etc. The scale of G major is the best to commence with, as the left hand is naturally set to this position of the violin. The beginner generally finds rather more difficulty in coming down the scale than in ascending; this is particularly noticeable in the stopping of the semi-

tones. For the semitones the fingers, as a rough guide, should just about touch each other, and when leaving one string all the fingers must be placed ready on the adjoining one. The finger points must be firmly pressed; this is rather painful at first, but the skin at the tips of the fingers soon thickens, and no inconvenience is then felt.

It is, in the majority of cases, the teacher's fault if a student has neglected his scales. There are many indifferent and incapable teachers, who do not make scales and arpeggios an important factor of study; this is to be regretted, because the benefit derived from them is incalculable. Although they are admittedly tedious, they repay one's toil a hundred-fold. They are the foundation of technique, and students who have avoided them find it difficult to hide their technical deficiencies. Many books of scales are published, with various fingering; three of the best are E. W. Ritter's, Hans Wesseley's (published by Augener) and Henry Tolhurst's (Swan and Co.).

Young beginners will no doubt notice a grating sound, produced by the bow when travelling over the strings. This need not disturb them, as it is unavoidable and not audible at a little distance from the player.

### **Practice of Exercises.**

After scales, should come the latest exercises—those which have presented the greatest difficulty at the last lesson. Before playing them, an attempt



should be made to recall what errors were pointed out at the lesson, and the teacher's bowing and fingering marks should be carefully examined. It is advisable to ask the teacher to pencil-mark the exercises if there is any chance of forgetting, though a piece should not be marked unless there is a special reason for it. But it often takes longer to get a piece correct, if it is not marked; this is especially the case in those bars which present extra difficulty and need separate attention. Next should come a brief analysis of the exercise or piece, a self-examination covering the following points:

- |          |            |                |
|----------|------------|----------------|
| 1. Clef. | 3. Time.   | 5. Fingering.  |
| 2. Key.  | 4. Bowing. | 6. Expression. |

This should be followed by the playing of the scale of the key in which the exercise is written, with different bowings; for instance, full long bows, first with two notes to the bow, then with four, and so on up to eight. Next full bows again, then half-bows for each note, and gradually shortening the bow until the centre only is used, producing a short staccato note. Do not practise without the music. This is very important; memory cannot be trusted until the music has been thoroughly mastered. If the important work and scales are left to the latter part of the practice, there may not be sufficient time for them, and interest may have begun to flag. It is not wise to try to perfect every point at once; one difficulty should be conquered at a time.

### Reading at Sight.

Reading at sight is another important matter too often neglected. It is very difficult for a teacher to find time to include everything he would wish in the short weekly lesson, but the reading of new music is of such importance, especially to the more advanced pupil, that it should not be forgotten. The player learns to look in advance of what he is playing, to observe in a moment the phrasing (and, needless to say, the spirit) of the composition he is interpreting. Pupils are often staggered by the appearance of new music; they do not take into consideration that the good player does not read each note individually. In scale passages or long runs he notices what notes, if any, are absent, the accidentals, and the first and last notes; this assists in speed. People read by comparison and habit, not repeating every letter. A beginner, on looking at a page of music, will often make some remark as to the impossibility of playing it at sight; he does not know that the experienced pupil does not consciously read every note—yet seldom misses one. The pieces chosen for sight-reading must be in varied keys, not selected because they have few sharps or flats in the signature. Naturally easy exercises should be chosen at first, and graduated in accordance with the student's progress. It is well to read a difficult piece through several times. Here a knowledge of theory is particularly helpful.

### Rhythm and Tempo.

Many pupils have great trouble with time and rhythm. Some appear to be naturally gifted with a sense of rhythm, others can only develop it by constant hard work. It exists, in a greater or lesser degree, in every human being, and is controlled by will and nerve power. Bad time is often caused by nervousness. Difficult passages usually result in a slackening of the *tempo*. Many are at the mercy of their nerves; this is part of the price the musician must pay for his art, but will-power and self-control must be gradually built up. No one need despair, as with application and practice a sense of time can be cultivated. The mind should be trained from the beginning to think in terms of steady time, and very easy passages, with the beat well-defined, should be chosen at first. For example, quadruple time passages of four even crotchets, one for each beat, will do much to improve equal counting. The pupils' thoughts should be intent upon these measured beats. Confidence is essential, and can only be obtained by the complete concentration of the mind on the music. Counting should be done mentally, not aloud, if possible; but many find that it is only by emphasising the beats aloud that they can cultivate a sense of rhythm. When such is the case, this method should be discontinued as soon as possible. Continued practice with a metronome should not be indulged in regularly. It is useful for giv-

ing the exact *tempo*, but pupils should be taught as soon as possible to judge the *tempo* of a composition from its character. Always to use the metronome for pieces and exercises destroys all elasticity of rhythm and makes music mechanical.

If difficulty is experienced in reading a run of notes of equal value, it may sometimes be rendered easier by accentuating every half-bar or quarter of a bar where the music is written in quadruple time and divided into semiquavers. In long or quick runs of triplets the first note of each group should also receive a very slight accent.

### **Sensitiveness of the Violin.**

One often overhears the remark: "This violin sounds badly to-day; I can scarcely do anything with it." One is reminded of the bad workman and his tools, but still there are times when the weather affects the tone of the instrument. Old violins are very sensitive and get out of order without any apparent cause. But the usual reason for the violin's "sounding badly" is the player! It will be found that hard practice is the best cure. But there may, of course, be a fault in the adjustment, or damp weather *may* be to blame.

### **Instruction Books for Self-taught Students.**

For the benefit of prospective self-taught students it will be as well here to mention those instruction books which are most suitable for self-tuition, al-

though it must be clearly understood that, however clear and excellent the book may be, practical demonstration is really necessary. Different teachers favour various methods and instruction books. In any case, a method suited to musical people beginning the study of the violin somewhat late in life is by no means the best for a child. The fault with so many books is that they commence with exercises in the natural key of C major. Theoretically, this is quite correct, but from a practical point of view, it is objectionable in the early stages. With young students there is a tendency to shift the hand to get the F in tune; or if this is not done, the F is generally played a slight degree sharp. The result is that the hand acquires an unsettled position and a bad habit of not playing in tune is contracted. Spohr's famous book, although a magnificent work for more advanced pupils, is so rigid as to start the beginner in the key of C major. It has been put forward in defence of this, that a difficulty should be overcome at first, not postponed. This is quite true, but the instruction given to young pupils should be made as simple as possible until they have become accustomed to the handling of the instrument. Bright pupils who show special aptitude, both physically and mentally, may be allowed to commence in the key of C. One of the best and most inexpensive books of this class is Berthold Tours's "Tutor" (published by Novello). It is certainly a good one for those wishing to attack the

difficulty of key at the start, and it deals with the most elementary necessities of a young beginner. The diagrams of position are excellent, and the more advanced exercises, with a second violin part, very melodious. A very attractive and tuneful work is Loder's "Instruction Book for the Violin" (Hutchings and Romer, Conduit Street, Regent Street, London). A cheaper edition may be obtained from Messrs. Kohler and Son, Edinburgh. One of the most useful books for very young beginners is W. C. Honeyman's "Young Violinist's Tutor and Duet Book," which has already gone into many editions. It can also be obtained from Kohler and Son. A most helpful book is Craig's "The Violin Student's Progress" (Craig, Aberdeen). A valuable but more expensive work is the one in three volumes by Carl Courvoisier (published by Augener). It forms a complete school, and the author adopts the system of opening in the key of G major. There is another on the same method, "A Modern School for the Violin," by A. Wilhelmj and J. Brown (Novello). The pupil starts, after the open notes, with the first four notes of the major scale on each string. These train the ear as well as the fingers, following the sol-fa sounds of doh, ray, me, fah. Three scales are also mastered by this method, G, D and A major, the simplest keys for beginners. Another very thorough and comprehensive book is the "Violin School," by Mazas (Litolf).

### Sevcik's "Violin School."

For more ambitious students Sevcik's famous "Violin School" and "Studies" can be used. The "School for Beginners" (Bosworth) is a wonderful work. In it the left hand is well-drilled to one set position of the fingers, each change in the distances preceded by a drawing illustrating the position of each finger. For position work, a book which every student should possess is Sevcik's Opus 7. Each exercise is so arranged that it is in the natural key, and the hand moves one degree of the scale higher in each successive bar, beginning on the G string and ascending high on each string before coming down to the first position on the next in continuation of the sequence. To practice these exercises in any key, the student has only to imagine the key signature as placed at the beginning of each line. The only drawback to Sevcik's method is its dryness and monotony in practising.

### Choice of Studies.

Studies should be diligently used, either with the instruction book or when its final pages have been reached. Among the most useful are R. W. Cave's "Forty Melodious Studies for the Violin" (Laudy), B. Althaus's "Forty Progressive Exercises," and "Twenty Studies," by R. Ortmans (Laudy). Of graded difficulty are Adam Carse's "Four Books of Studies," and Kayser's "Thirty-six Etudes," in one

or three books (Augener). More advanced are Dont's, Fiorillo's, Kreutzer's and Rode's.

For theoretical work, the "Elements of Music," by Franklin Peterson, "Introduction to the Study of Theory," and Parts I and II of "The Pianist's Handbook of Form," also by the same author, and published by Augener's, are excellent. There are also Dr. Cummings's "Elements of Music" and Sir John Stainer's "Primer of Harmony" (Novello's). All these are well-known text-books, and provide a sound foundation for a good musical education. More ambitious books can be studied at a later stage.

### **Hand and Finger Gymnastics.**

Apart from technical and theoretical practice, there is a necessary branch of study, unfortunately neglected by many students—muscular development of the fingers and wrist of the left and right arms. Carl Courvoisier, in his excellent little book, "The Technique of Violin Playing," remarks on this mechanical part of execution. He tabulates the requirements of mechanism as follows:

1. Strength of those muscles, situated in the neck, which bend the head forward (and slightly on a side), in order to press the violin against the collar-bone with the jaw.

2. Freedom of action in both arms, from the shoulder-joint down to the last finger-joint.



3. On the part of the left arm: (*a*) The faculty of turning the forearm (from the elbow-joint) well outward, in order to bring the base of the little finger as near as possible to the neck of the violin. (*b*) Agility of the thumb, especially in its root-joint, close by the wrist. (*c*) Strength of the flexor (bending) muscles for the two outer finger-joints, for the purpose of pressing the strings down on the board. These muscles are situated below the elbow, in the forearm. (*d*) Strength of the small muscles within the hand which move the fingers in their root-joints (knuckles).

4. On the part of the right arm: (*a*) The faculty of turning the forearm well inward, to procure a solid pressure, through the bow, on to the string, for accents or continuous loud tone. (*b*) Subtle feeling in the first finger, as the means of transferring that pressure into the stick of the bow. (*c*) Strength in the thumb, as the support against such pressure. (*d*) Strength in the little finger, for the purpose of balancing the weight of the bow.

The opportunity may here be taken of recommending that most useful little book, "Hand Gymnastics," by Ridley Prentice (Novello). It contains in all about thirty exercises for the arm, wrist, hand, fingers and thumb. The violinist can pick out many which will amply repay the time and attention given them. They are quite simple, and no appliances are required, but all movements must, as the author insists, be intelligently and thoughtfully

performed, as the main object is the gaining of control over various sets of muscles.

### **General Weakness of Fingers.**

Muscular flexibility is so vital to good playing that special attention should be given to the matter. It is true that a certain amount of flexibility and power of the fingers of the left hand can be obtained by the constant playing of exercises written for the fingers, but the helplessness of the majority of people, as regards finger power, can be easily proved by shutting the fingers (not the whole hand) firmly down on the fleshy cushions at their base, holding the hand straight out, and then trying to extend the fingers one at a time, still keeping the remaining fingers tightly clenched. Inability to do so is entirely due to the connecting muscles in the body of the hand not being separated enough to work independently.

### **Cork Exercises.**

An excellent cure for this weakness can be practised, in addition to Prentice's exercises. Three large corks must be placed between each finger at its root, the centre cork being placed last. For the first few practices the corks can be allowed to remain between the fingers for about five or ten minutes; then, when accustomed to them, the fingers should be shut and opened together and alternately. If difficulty is experienced, the fingers should be assisted by the right hand until they are able to move up or down inde-

pendently. This cork exercise will cause the finger muscles to stretch, and greater freedom will result both in playing and in command of the fingerboard.

### **Right Wrist Exercise.**

Another simple exercise for the right wrist to assist its flexibility may be done with a round office ruler about eighteen inches in length. It should be grasped at one end just sufficiently to prevent it slipping from the fingers; then a pendulum motion should be given by the hand only, the arm being kept rigid. This movement should be practised both with an upward-and-downward motion of the hand, and backward-and-forward one, like a clock pendulum. In the upward-and-downward exercise, a firmer grasp will be necessary to prevent the ruler from slipping.

### **The Finger Web.**

Some students suffer from weak fingers, and have the skin so growing between them that their suppleness is greatly impeded. Basil Althaus says:—

“This web, or rather growth of skin, is to be found in all hands, yet it differs considerably, and I have known cases when the skin has reached so high up as to be a great impediment and detriment to violin-playing, so much so that the fourth finger, D, in the first position on the G string, has been almost an impossibility for some months, and, moreover, giving actual pain, whilst, one might say, the stretching pro-

cess was going on." He suggests as a cure the playing of four exercises on four notes all on the G string, C with the first finger, E with the second, G with the third, and B flat with the fourth; the first finger C remaining firmly down the whole time, in the third position." It is a drastic exercise, but most effective, and should not be practised too long at one time. The thumb will have to be brought right under the neck, close to the body of the violin, so as to be able to bring the four fingers right over the G string, in an upright position."

### **Perspiring Hands.**

Perspiring hands are another great trouble to many violinists and others whose occupation necessitates delicate work with the fingers. This condition is often caused by the player's state of health, lack of fresh air, and not sufficient physical exercise. When such is the case, a good tonic, outdoor exercise and sunlight, are needed. If the health is good the fingers may be "seasoned" by severe exercises and rapid scale playing. Steeping the hands in hot water for five or ten minutes, followed by immersion in cold water, is very often effective. Many firms sell a special preparation to be rubbed upon the hands before playing, but they are not always good, and may sometimes be actually harmful. It has been found that a certain cure may be effected by the application of Röntgen rays with special care.

## CHAPTER VII.

### CARE OF THE VIOLIN.

#### **Class of Playing for which a Violin is Required.**

**A**N important factor which may be overlooked when buying a violin is the kind of work it is required for. Is it for home use, study purposes, solo playing, or orchestral playing; or for all four? If for home use only, any sweet-toned instrument will no doubt be suitable. The most desirable model for this would probably be an Amati, for orchestral playing a Guarnerius, and for all-round use a Stradivarius. But, finally, **TONE** must be the deciding point; everybody does not appreciate the same quality of tone, and it is very largely a matter of individual judgment and taste. Much argument has arisen from time to time on the subject of model, for there are fashions in fiddles as well as in other things. At one period Guarnerius instruments are fashionable, at another Strads. Now, model does not always count, but tone does; so be guided by tone-quality and let the model be a secondary consideration. Many violins of ugly and nondescript

appearance have magnificent tone, although their model would make the dealer and expert weep.

No two models suit the same player, as we can prove by noting the instruments used by famous violinists. They do not all play on one special model to the exclusion of all others. So choose the model which suits you, if you are a player; if not, trust to the judgment of the friend who is purchasing for you.

For power combined with sweetness one is inclined to give the palm to Guarnerius and Stradivarius models. A good maker will construct a violin upon any model you desire.

About £8 to £10 is a fair price for a good new violin by a British maker.

### **Violin Sets.**

Cheap sets, consisting of violin, bow, case, resin, pitch pipes and extra strings, should be avoided. They are very often got up to please the eye rather than the ear, unless a very high price is paid, and each portion of the set chosen separately.

### **Cheapness.**

An instrument should not be bought because it appears to be cheap. Some knowledge is required to judge whether a violin is really *cheap*. It may be very charming in appearance, but appearances are very deceptive. New violins, copies of old masters, can be purchased from 30s. to £40, but those who

give the latter price deserve censure. Genuine Stradivarius violins, when new, were sold for less than a quarter of that amount.

### **Cleaning the Violin.**

Many good old instruments have been ruined by neglect. Do not lay the violin or bow on a chair; they must always be placed in safety. The case is the correct receptacle, provided the lid is shut. Violins laid on chairs and sofas have often been damaged through people sitting on them. In removing the instrument from the case, handle it by the neck. Should the breast be thin owing to age, a broad-bladed chin-rest should be used; this will protect it from too great pressure. It is important to keep the exterior of the violin clean, even if not in use, as the amount of damage a little dirt can do, if allowed to accumulate, is astonishing. If not cleaned, the instrument gets clogged and sticky, and dirty black patches caused by the powdered resin appear under the bridge and in the curves. This is especially noticeable in front of the bridge and under the end of the finger-board. Nothing looks more unsightly than a lot of powdered resin lying on the breast of the violin, like so much flour. It is a silly idea of some students to let it remain as a sign of plenty of practice; this is nonsense, as it tends to clog the vibrations and attracts damp. Care of the interior of the instrument is equally necessary. It is well occasionally to clean the inside by pouring into

it a small quantity of hot barley, and shaking carefully. When this is done, care must be taken not to displace the soundpost. The dust and fluff which have accumulated will be taken up by the barley, which can then be gently shaken out. Another method is to cut a V-shaped piece of thin cloth about eight inches in length, attach a thin piece of string to the narrow end, slightly damp the cloth, and insert it carefully through one of the sound-holes, leaving the end of the string outside. Shake this cloth into every part of the interior, and see that the soundpost is not caught by the string; then remove by the aid of the string. As we have very long periods of damp, foggy weather, it is well to take the instrument out every day and carefully wipe the exterior with an old silk handkerchief; but a violin not in use should be locked up and kept where dust cannot get to it, so as to save the varnish, as continual dry dusting will in time weaken the varnish and cause it to lose its lustre. To preserve this, the instrument should not only be well dusted all over, but also cleaned and "nourished" by the application of good quality raw linseed oil. It is important that the oil should be pure and raw, neither "boiled" nor containing artificial "driers." This cleaning with oil need only be carried out about twice a year, but the dusting must be done regularly each day when the instrument is used. Only a very small quantity of oil is needed; it can be applied with a piece of rag and well rubbed in. When all parts of the violin



have been so treated, a piece of silk may be used for polishing. It is better if the oil is old, and it can be "aged" quickly by placing it in an open bottle exposed to the sun, the neck being covered with a piece of gauze or thin linen to keep out insects. The oil must not be exposed so long as to cause it to thicken too much. The colour will denote its age, as new linseed oil is yellow, with a faint trace of green. For this purpose the oil should be of a pure clear golden yellow.

For those who find it too much trouble to prepare the oil as directed, several firms make up violin cleansers in small stoppered bottles. In handling the instrument, avoid touching the strings where the bow travels, or they will become dirty and greasy. To prevent this, the fingers should be dry and clean, and the nails short. Long nails are likely to damage the strings and make them break sooner. The neck of the violin should be perfectly smooth and free from all grit, dirt or grease; otherwise the shifts cannot be managed easily.

### **Chin-rests.**

The choice of chin-rest to be used is a matter which needs careful thought. Is a chin-rest necessary at all? Many players are able to perform without such an aid; these are the fortunate ones. But usually some support is necessary when a great amount of position work has to be done. The size of the collar-bone will be an important factor in decid-

ing on the use of a chin-rest. If it is small, and nature has given the player a long neck, the chin-rest will be a necessity. The model of the violin will also be of importance in deciding this point. One with a very much raised breast will require a chin-rest both to give a grip and to preserve the instrument from pressure. It is strange, but true, that constant practice will cause the collar-bone to become prominent and "set" to the violin. Those who find it difficult to hold the instrument at the correct angle and prevent its side-slipping, sometimes use a small velvet pad or cushion placed below the collar-bone, and inclining towards the shoulder. A silk handkerchief rolled up would answer the same purpose, but neither of these devices is neat or artistic, and, if possible, they should be dispensed with. If a support for slipping must be used, a suitable chin-rest should be fixed.

### **The Ridge Chin-rest.**

In choosing the style and shape of his chin-rest, the student has dozens of different designs to pick from, each claiming to be the most useful. It is only necessary to mention a few. First, for all-round utility, the ridge chin-rest is as useful as any, especially to the player with a rather long neck; it is very popular, and prevents side-slipping. It consists of two ridges of ebony, smooth or serrated, or covered with velvet. The serrated ebony is best, as the velvet wears very shiny and becomes dirty through use.

The upper ridge is fastened to the lower by one or two screws which can be lengthened or shortened for adjusting. This holder assists in sloping the violin at the correct angle, the ridges being thinner at one end than at the other (Plate X, Fig. 9).

### **The Blade Chin-rest.**

The blade chin-rest is an oval piece of ebony, shaped to receive the chin of the player, and raised a little above the breast of the violin. It is very useful to students with short necks or double chins, because of the easy grip obtained. It also protects the breast of a very old violin (Plate X, Fig. 8).

### **The Support Chin-rest.**

A third kind of chin-rest consists of a metal bracket with a velvet pad at the end, which is fitted to the rest and projects under the instrument on to the player's left breast. It is not very satisfactory, and tends to interfere with the freedom of movement (Plate X, Fig. 7).

### **Resining the Bow.**

Another important matter, insignificant as it may appear, is the resining of the bow. If the bow is a new one, or has just been rehired, powdered resin, fine as flour, must be rubbed into the hair from both sides. Apart from this, the hair of the bow should always be covered with sufficient resin, so as to pre-

sent a perfectly white appearance. Before playing, the hair should be drawn about a dozen times, not too quickly, backwards and forwards over the resin. To do this too quickly chips the resin, and the fine powder does not adhere to the bow hair. The fingers should not touch the hair, except at that part of the bow near the nut where the back of the thumb presses against it. A correctly resined bow will "grasp" the string, and produce tone easily. Too much resin must not be used, or a contrary effect will be produced, and a crust will form on the strings and spoil them. In addition, powdered resin on the surface of the violin, under the bridge, has an unpleasant appearance. Enough to secure a crisp tone, without harshness, is all that is necessary, for the tone of a good violin will become harsh with the use of too much resin. The particles of resin lodge in little lumps between the hairs of the bow, and an unpleasant harshness results. Of course, not enough resin is equally unsatisfactory. Absence of resin will cause squeaks or breaks in playing long sustained notes.

### **The Case.**

When not in use, the violin should be kept in its case; and the matter of the case also deserves some consideration. There are a vast number on the market, each claiming to be the best. For lightness and ease in carrying, those made of pasteboard or aluminium and covered with leatherette, or of better quality in papier mâché, and shaped to the violin,

are excellent (Plate XI, Fig. 13). For good, hard, lasting wear, those made of pure cowhide cannot be excelled, but unfortunately they do not afford sufficient protection to the instrument, as the case gives if it receives any hard knocks. The old-fashioned coffin-shaped wooden cases are excellent for protection, especially if of first-class material and well padded, but their shape and weight is a drawback.

It would be a convenience if case-makers would provide a separate compartment to hold a few pieces of music. This would do away with the necessity of carrying two cases, one for music and the other for the instrument. Besides the instrument, the case should contain the following articles: a second bow; an air-tight tin string-box; an extra set of strings, including two or three E strings; a pair of string nippers and scissors combined; an extra bridge shaped ready for adjusting; a string gauge; a box of resin in a wash-leather holder; a mute; a piece of tailpiece-gut; a flannel or shaped cover for the violin; and an old silk handkerchief for dusting purposes.

■

## PART III.—TECHNIQUE, ETC.

### CHAPTER VIII.

#### **Holding the Violin and Bow.**

THE reader should turn back to the chapter on "The Study of the Violin" and carefully re-read the portion dealing with the position and manner of holding the instrument. At the risk of repeating some of the previous instruction, it must again be emphasised that the violin should, if possible, be always practised standing, the weight of the body resting on the left foot and the right slightly in advance of the left. Whether sitting or standing, the position of the body should be easy and not constrained. The violin is held between the left collar-bone and the left side of the chin, the latter resting on the instrument (or chin-rest) at the left of the tail-piece. The chin must not press or rest on the latter. If these instructions are carried out, the player's head will incline a little to the left. The scroll should be held out horizontally and with a slight slant side-

ways towards the E string, at an angle of about forty-five degrees; this will allow of playing freely on all strings. To ensure that this is so, see that the bow, when placed on the G string, is almost horizontal, while on the E string it is practically perpendicular. The left wrist follows the angle of the lower arm, and should not be bent inwards so as to touch the neck of the violin. The left elbow should be brought well under the body of the instrument, but in doing this, be careful not to contract the ugly habit of hitching the left shoulder forward to grasp the violin. On no account should it be held so that it rests on the player's chest. To guard against this and to obtain a greater command of the whole fingerboard, the student should place his instrument as far back as possible over the collar-bone towards his neck. (Plates XXVII and XXVIII.)

The position of the left hand fingers and wrist next demand attention. The neck of the violin must not rest in the hollow between the thumb and forefinger, but should be held between the third joint of the forefinger and middle of the upper joint or ball of the thumb. The weight of the violin is thus supported by this ball or fleshy part of the thumb just above the first joint. It should also be noted that the neck does not rest upon the bone forming the third joint of the first or forefinger, but against the fleshy part of the first finger, immediately above the bone. This position will prevent the top of the thumb from rising too much above the level of the

fingerboard; about a quarter of an inch above the level of the strings is quite sufficient. The thumb should not be pressed too tightly or rigidly against the neck; it should be so placed that the neck can be held lightly, but at the same time firmly enough to prevent slipping and also to allow of the shifting of the hand into the higher positions. Avoid resting the left elbow against the body; this is bad. The fingers of the left hand must fall vertically upon the strings, squarely from the knuckles, and never allowed to lie flat on the strings; the extreme tips of the fingers should be used and the finger-nails kept short. When placing the fingers, bring them down firmly on the strings, raising them well for each note. If all the fingers are placed in position, the first for A on the G string, the second for F on the D string, the third for D on the A string, and the fourth for B on the E string, it will be seen that the joints have a flat, table-like appearance. The position of the left wrist has already been explained; it should always be remembered that it must not touch the ribs of the violin or be turned out towards the scroll, but should be held in a perfectly straight line following the line of the forearm. This position is necessary for a most important reason, to allow freedom and flexibility for the sinews which control the fingers. If the wrist is bent out of line with the forearm, the fingers are to a certain extent hampered in their movements and grip on the strings. (Plate XXIX, Figs. 1 and 2.)





PLATE XXVII.

HOLDING VIOLIN AND BOW, FRONT VIEW.







PLATE XXVIII.

POSITION OF THE ARM AND SHOULDER, SIDE VIEW.

Some authorities do not approve of this stopping of the four strings as fixing the hand and fingers for the "first position." They say it is altogether wrong, except for continual distribution of the fingers on all four strings and that the outer strings would be pulled over sideways when fingering. But it can be seen that this is not so, if the left elbow and arm are placed well under the violin. If the elbow be placed well under, and near to the chest, but not in contact with it, the correct position of the fingers, and their readiness to fall in the position of a finger on each string, will result without any difficulty, or the pulling sideways of the lower strings. Briefly: the correct holding of the violin depends on keeping the fork of the thumb well away from the neck, the weight of the violin resting chiefly upon the fleshy part of the thumb, the left hand well over the fingerboard, the wrist out and away from the neck and following the natural line of the left forearm, the knuckles of the fingers turned out square and flat so that the finger tips fall perpendicularly on the strings, the left elbow well under the instrument, the weight of the body supported by the left foot, the chin not gripping the violin too tightly, and the head of the player inclined a little to the left. These rules should be carefully followed as position is of vital importance in playing.

### **Holding the Bow.**

The method of holding the bow is difficult to master at first, but as it is absolutely essential to all who

would command expression and tone, the greatest care should be taken to master it from the commencement. Many hold the bow either too rigidly or too lightly. It is, of course, necessary that it should be held firmly, but at the same time freely enough to allow of flexibility of the fingers. It is a grave error to hold the bow too far from the nut; some do this knowingly, others quite unconsciously. The fingers of the right hand should be placed as close to the nut as possible; the fingers must not be crowded; the thumb should be well into the nut, touching the prominent part of the wood where the nut slides, while the nail rests obliquely against the hair. If the bow is held too far away from the nut the player loses a great deal of power, and is also at a disadvantage when slurring a large number of notes with one stroke of the bow. The bow is held between the first joints of the second and third fingers and the tip of the thumb. The first finger acts as the means by which various grades of tone and power are produced and the fourth or little finger as a balance to take weight from the bow and assist the first finger in balancing. This grading of tone depends upon the speed of the bow, which naturally assists the first and fourth fingers in their pressure, if the bow is held correctly. The tip or top part of the ball of the thumb should be placed on that part of the stick which faces the inside of the hair and against the nut; the first three fingers should not be tightly squeezed together but sloped gracefully over the stick towards the heel of the bow; the tip of the little

finger rests on the top of the stick. The third finger has half of its first joint over the stick, the second its first joint well over and the first holds the bow in a hooked manner between the first and second joints. The stick really lies across the first joint of the first finger as well as the other fingers, but its position is slightly changed when bowing from nut to point, by becoming inclined toward the second joint. The thumb nail should touch the edge of the hair close to the metal ferrule of the bow, between the second and third fingers. The position of the hand should be such as to allow the wrist to turn the bow over when changing from one string to another, in a natural manner. Use the bow always with the stick bent away from you and the hair facing you. (Plate XXX, Figs. 1, 2, 3 and 4.)

### **Bowing.**

What the management of the breath is to the singer, the command of the bow is to the violinist. The strings are the vocal organs of the violin and the bow is the breath which gives them life and sound. Bowing is the foundation of all tone. The violinist who can play a very long sustained note commencing with the faintest *piano* and gradually increasing to the loudest *forte* and *vice versa*, all with one stroke of the bow and without allowing any tremor or quivering to be heard, has obtained that command of the bow which is the sure foundation of good bowing technique, and hence of good tone. To

attain this demands a perfectly loose and supple wrist, and the practice, in the early stages, of long slow bows—watching in a mirror to see that the bow travels parallel with the bridge. This is admittedly difficult at first, as the beginner finds that the bow makes curves—the fault of the bowing arm. The bow should always be kept parallel with the bridge, as the slightest slanting to right or left spoils the tone. In acquiring this bowing, it is well to practise on the open strings, as full attention can then be given to the results as seen in the mirror. Do not play too near the bridge, but about half way between it and the end of the fingerboard. Remember that all motion must proceed chiefly from the wrist and elbow, not from the arm. In a full length stroke, the forearm can command about two-thirds of the bow's length from the point inwards, while the upper arm stroke is required for only about one-third near the nut. Players with exceptionally long arms can very often use the whole length of the bow from the elbow alone. In returning the bow from tip to nut, bend, or rather turn, the wrist slightly. This will help the bow to move in a straight line. If the lower half of the bow is being used, the forearm should be only raised sufficiently to allow the hand to hang from the wrist, which joint will then assume an arched or raised attitude. As the bow moves down, the wrist follows similarly, so that by the time the bow is at the point the wrist is really bent outwards. In playing the up bow, the same rule can be followed, with the difference that the movement is made in



the contrary way. The constant practice of long slow bows in this way is a sure means of developing a free wrist—one of the first things to be mastered. If the wrist has once become stiff it is very difficult and in many cases impossible, to make it perfectly free again. A good way of getting clear notes is to allow the hand only to move with the bow at the start, following immediately afterwards with the forearm. The same method can be applied to the commencement of up bows. The position of the right elbow should be near the right side. It should not be cramped by being rigidly kept close to the side; about nine inches should be the distance when playing on the G string.

Another difficulty experienced by many in the use of long bow strokes, is that of obtaining the necessary change of weight from the right (little finger) side of the hand to the left. The bow becomes top heavy and it can be seen that, when playing with the lower half, the top weight of the bow requires a fair amount of balancing power from the little finger; but when the upper is played, this finger-weight is unnecessary and firmer pressure from the first finger must be applied. Some find it difficult to keep the little finger on the bow, especially when playing at the extreme point. Those who are blessed with long arms and fingers will experience no difficulty in this respect. When it is found impossible to draw a full bow and retain the little finger in position, the third should be made to take its place as the balancing agent by using the cushion of its top joint. Bowing

exercises should always be practised on the open strings first and easy exercises chosen to which the bowings can be applied.

To recapitulate: the full length stroke is commenced from the nut by the wrist, continued to the centre of the bow by the upper arm, from the centre almost to the point by the forearm alone, and completed by the wrist. (Plate XXXI.)

### **The Half Stroke.**

The half stroke is chiefly used from the centre of the bow to the point, in passages in moderate *tempo*. In fact all music consisting of a series of quick, light notes is played with the upper part of the bow. In half strokes the movement is made from the forearm, and wrist, the upper arm only moving sufficiently to allow the bow to change from one string to another. The elbow of the bowing arm should be kept as low as comfort will allow, and the wrist free (but not too much so). The up-stroke must be of the same power as the down; there is a tendency to give great stress to the down stroke, so commence exercises with an up-stroke as well as a down. Great pressure from the first finger is not necessary in a *forte*; the speed of the stroke and amount of bow used will be quite sufficient. Too heavy a pressure will produce a grating sound and prevent the free vibration of the strings. Attention must be given to the changing at the centre of the bow from a down to an up-stroke; the wrist will be more bent when changing at the cen-

tre and depressed at the point. Practise on open strings and scales, before playing exercises. This half stroke can be played at any part of the bow, but it is generally used from the centre. (Plate XXXII.)

The lower half stroke of the bow is not used to any great extent; the heaviest part of the bow resting on the strings interferes with speed and clearness. The upper half of the bow is therefore decidedly preferable. Strokes from this part of the bow are made by the upper arm and forearm from the shoulder, the wrist being used at the nut. (Plate XXXIII.)

### **The Short or Wrist Stroke.**

The aim of all violin students should be to obtain a perfect wrist stroke. We have spoken of the full length, upper half and lower half strokes, and now comes the most difficult of all, though like many other things it looks deceptively easy. As the name suggests, it is only used for very quick and short strokes at any part of the bow. Rapid repetition on one note is termed *tremolo*. This form of bowing is done entirely from the wrist, both parts of the arm being kept still except for depressing or raising the bow; although played at any part of the bow, the part between the middle and the point is generally used. Only a small quantity of bow is required, and for a start the student can place his bow in the centre of an open string and make as quick a movement as possible backwards and forwards, following the bow stroke, with his wrist only, taking care that the arm

does not move. A very small stroke is all that is necessary. This flexibility of wrist must be obtained slowly at first, by taking two or three strokes to one note in the time of a quaver, or even crotchet, provided a small quantity of bow is used for each note. The position of the wrist and hand should be observed carefully; besides the flexibility of wrist, there is also that of the thumb joints to be watched. The latter "give" a little with the hand, but the tip of the thumb must remain firm against the nut. Some players remove the little and third fingers from the bow, with the mistaken idea that this makes it easier to obtain a free wrist. This is not necessary; the fingers should remain on the bow stick but not so firmly as to prevent its free movement to and fro. Keep the little finger on the stick. The mastery of this stroke can perhaps be more easily obtained by practising at the heel of the bow. To do this will at first produce a harsh and grating effect, but the action of the wrist can be better observed. Do not try to make the wrist-stroke long; it must naturally be very short as the movement of the hand from the wrist is restricted. If a longer stroke is required the fore-arm will also be used slightly. One cannot over-emphasise the importance of this stroke at the heel. P. Stoeving in his book on "The Art of Violin Bowing" (Vincent Music Co., Ltd.) recommends that for a complete mastery over this important form of bowing, the practice of the martelé at the nut is one of the most effectual means of obtaining a free and loose wrist. He states:

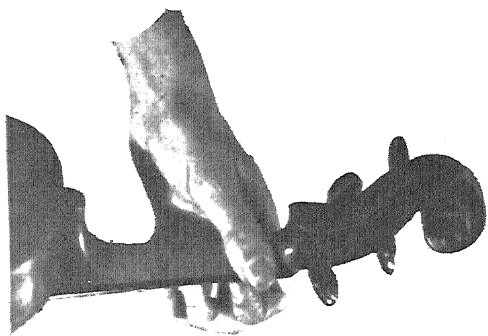


FIG. 2.

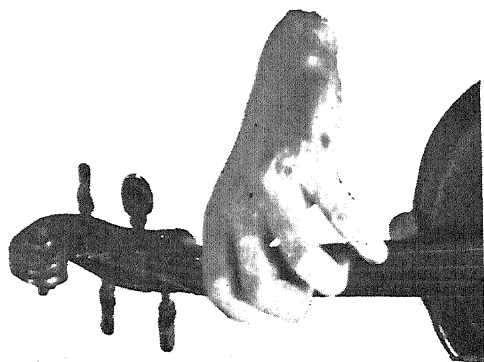


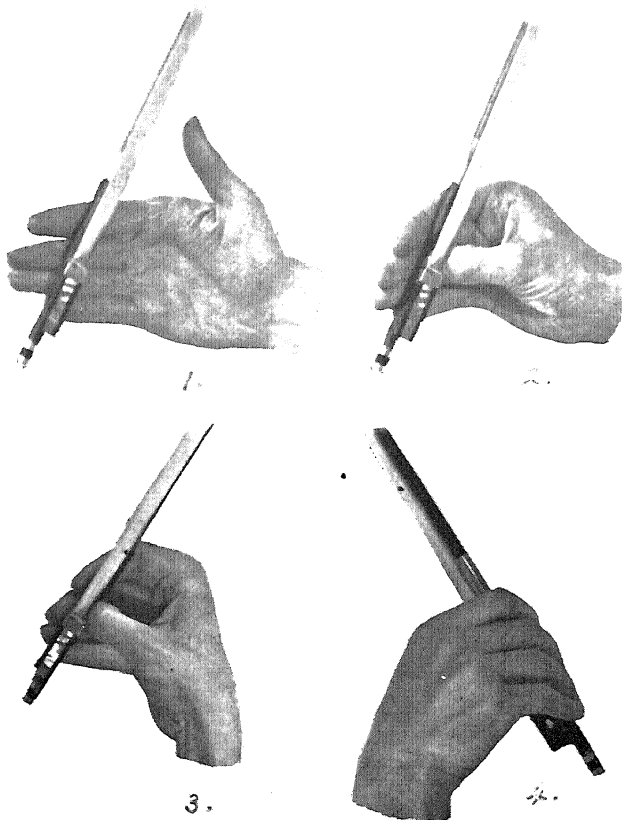
FIG. 1.

PLATE XXIX.

HAND AND FINGERS PLACED IN THE FIRST POSITION. FIG. 1. FRONT VIEW.  
FIG. 2.—BACK VIEW.







### PLATE XXX.

#### POSITIONS FOR HOLDING THE BOW.

Fig. 1.—Bow placed on the open hand. 2.—Thumb placed in position on the stick.  
 3.—Hand and fingers closed ready for use. 4.—Back view of the hand.



"The tone will be very scratchy, of course, but when the pupil has once learned to feel the weight of the hand and bow independent, not to say separate from the wrist, it will not be long before he is able to alleviate this weight, and the tone will improve. The wrist will also become more and more loose, and the strokes become longer."\*

When this stroke is played *tremolo* and a *forte* is required, the hold of the bow can be tightened and a little more bow used; for a *piano* the hold of the bow is relaxed to a certain extent. In any case it should not be held so rigidly as to prevent freedom of the wrist action. The action of bowing and use of the bowing arm can be summarised as follows:

1. Upper-half strokes of the bow must be made with the forearm and wrist.
2. Lower-half strokes are made principally with the upper arm.
3. Very short strokes at any part of the bow are played with the wrist.
4. Full length strokes are a combination of the above three.

Lastly, it would be as well for the student to take note of Tartini's advice on bowing: "The first study should be the true manner in holding, balancing, and pressing the bow lightly, but steadily, upon the string, in such a manner that it shall seem to breathe

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\* "The Art of Violin-Bowing," by Paul Stoeving. (Vincent Music Co., Ltd., London, W.)

the first tone it gives, which must proceed from the friction of the bow and not from percussion, as by a blow given with a hammer upon it. This depends upon laying the bow lightly upon the strings at the first contact, and on gently pressing it afterwards, which, if done gradually, can scarcely have too much force given to it, because, if the tone is begun with delicacy, there is little danger of rendering it afterwards coarse or harsh. Of this first contact and delicate manner of beginning a tone you should make yourself a master in every part of the bow—as well in the middle as at the extremities, and in moving it up as well as down.”

■

## CHAPTER IX.

### VARIETIES OF BOWING, ETC.

#### **Legato.**

**L**EGATO or slurred bowing has a beautiful effect and, when the notes are played on one string, does not present any difficulty. It is when crossing the strings that care and practice are required not to make the change noticeable or touch the open strings. Legato can be applied to two notes slurred or to a large number, and at any speed. To avoid accenting when changing from one string to another watch the position of the bow so as to bring it near the next string to be played on, and the changing from a down to an up bow be so clearly and smoothly done as to cause no apparent break to the ear. Another fault of beginners is to use the lower half of the bow too quickly when slurring a number of notes with the full bow, thus not leaving sufficient to finish the slur. To avoid this, do not use too much bow at the commencement of the stroke; if carefully done this will allow enough for the finish of the slur. Legato bowing is extremely difficult when notes are repeated on alter-

nate strings, backwards and forwards. Such are easy when they are played slowly, because the upper half of the bow can be used, as, for example, in slurring four open strings, A, E, A, E. Here the lower arm and elbow can be used to raise and depress the bow. But should these notes be required *presto* or be written as demisemiquavers, the elbow would not be sufficiently agile and the execution would be greatly dependent on the wrist, whose movement would be perpendicular; that is to say, the wrist would bend, with each change of string, slightly upwards and downwards—not sideways. If any other method is followed, the forearm and elbow would be rising and falling like a pump handle, thus preventing satisfactory speed, delicacy and clearness of the notes. A flexible and pliant wrist in such passages is essential. The beginner who is anxious to master this bowing in its easy stages should practise very slowly, with two slurred minims or semibreves, in the following manner. Place the bow at the nut, on the open G string; draw it as far as the middle, then stop; do not lift the bow but cross gently to the D string and, without touching the G or A, draw slowly to the point. Stop at the point without lifting, and with an up-bow play back to the middle—on the D string, stop and cross as before and play the other half of the bow on the G. This exercise can, of course, be played on any two open strings and should be constantly repeated. After mastering this simple stroke, try over three and four strings slurred, attention being given to proportioning the parts of the

bow accordingly. When quite at home with this, the same method should be followed, but without any stoppages of the bow between the notes and with perfect smoothness and evenness. It does not follow, however, that when quicker notes are played (such as sixteen semiquavers or thirty-two demisemiquavers) the bow will be divided into these numbers of parts. It is better as already stated to economise the amount of bow used for the first run of notes and, if found necessary, to widen gradually the distance between the last remaining notes if sufficient bow is found to be left over. In slurring over three or four strings the arm cannot remain stationary. It has to move with the wrist; but it should do so as slightly as possible, just allowing the wrist freedom on each string to reach the next by its up and down movement. Smoothness, equality and care of accent must be observed in this bowing, and a correct position of the bow, parallel with the bridge, maintained. For *piano* effects, the bow may be moved a little further from the bridge; for *forte* a little nearer. But no change in position must be made *during* a passage.

### Staccato and Bowing Marks.

The Italian word *staccato* means "distinct and short, or detached." In violin playing the term is applied to two or three various kinds of bowing, although it should really be used only in connection with a group of notes in one direction of the bow, and marked with a dot placed either above or below them. It is unfortunate that a correct and generally recog-

nised distinction is not made between the various kinds of staccato and bowing marks, and the method of denoting and playing them standardised. Courvoisier, writing on this matter in his "Technics of Violin Playing," says :

"I wish all violinists would come to an understanding as to bow marks on the paper, on the following lines :

"The 'slur' in violin music means legato, as in any other music ; for us then : smooth flow of the bow in one direction, and smooth turning, if we cannot get all the notes into one bow length.

"The 'dot' over or under a note means a slight shortening of its duration, producing a break or interruption. This sign, apart from its application to each single note of a series that should be detached (staccato) is also specially suitable as a mark for indicating the end of a phrase, by being placed over its last note, just as a comma would be placed after the last word of a sentence in written speech, when no sign for greater interruption is wanted. For the latter we have the rest signs in musical notation.

"The sign for extreme shortness of utterance, the vertical dash over a note, has been in general use formerly, and has wrongly been superseded by the mere dot. We must restore this sign for use beside the dot, for reasons to be explained presently.

"So far no alteration is required, only greater accuracy in the use of signs. But of late years some new and combined signs have crept into use which call for investigation. One of these is a horizontal

dash over a note, meaning the sustaining of the tone to its fullest duration. On the pianoforte this is equivalent to a legato sign, but on the violin it is clearly the right form of demanding a smooth turn of the bow after the note in question. This sign is therefore valuable. I would place it deliberately everywhere over these single notes (in patterns of bowing which mix short slurs with single notes) which are by many writers actually furnished with dots (!) where there can be no question of staccato or spiccato. Why these dots? To show inattentive readers once more that this note is not included in a slur? Is it not sufficient to write the slurs as you mean them?

"Further there is a combination of the horizontal dash with the dot  $\div$ , which cannot either be misunderstood. It asks us to sustain that note broadly, but still to allow a slight interruption before the next note. This style of utterance is called *semi-staccato*. When there is a series of notes to be treated in this way, the more usual sign is the slur over dots ( $\cdots$ ), which should be understood by violinists just as well as by players of wind or keyboard instruments. Pianists call this sort of broken legato *portato* (carried), which term is not so clear as *semi-staccato*. Unfortunately violinists misread this sign, and so the players of a violin and pianoforte sonata interpret the same passage differently. Why? Because for us the real *staccato* (in one direction) is marked that way. To avoid this confusion, *semi-staccato* has of late been marked by horizontal dashes

instead of dots under the slur (---). But this again looks for the pianist like a double legato-sign. The better correction is to place not dots, but vertical dashes under the slur (|||||) in violin for real staccato, and use the dots for semi-staccato."

One is inclined to agree with these remarks. It would undoubtedly make reading much easier and clearer if definite and recognised signs were more fully used.

It has been stated by many that staccato playing is a gift. This may be so with some players, but many can obtain it by diligent and careful practice. The wrist and forearm are the important factors in mastering this class of bowing and its most satisfactory results are obtained in the upper half of the bow. One might more correctly describe it as a run of quick short notes in one bow, each note receiving the very smallest of strokes. When well done this has a most beautiful effect. Between each note an infinitesimal rest is made and the note receives an accent. The strokes are produced by a perfectly free wrist and accent, or momentary pressure or nipping motion of the first finger and thumb for detached staccato. For the staccato in one bow, the arm and wrist are both used, the arm to move the bow and the wrist to make the staccato. Commence with an up-bow and let the forefinger give a little pressure; at the same time the hand and wrist make a very short, quick turning motion from right to left; this will push the bow forward slightly. Then comes a pause, during which the bow must remain on the string; the





PLATE XXXI.

POSITION WHEN COMMENCING A STROKE WITH THE BOW AT THE NUT.







PLATE XXXII.

POSITION WHEN AT THE CENTRE OF THE BOW





PLATE XXXIII.

POSITION WHEN AT POINT OF THE BOW.

pressure of the forefinger is relaxed and the wrist returns to its natural position. If the notes are at great speed, the pauses are of course decreased in length. It must not be forgotten that while the wrist makes each little note, the forearm moves the bow along. The whole may perhaps be more clearly described as a series of very short strokes in a long stroke; the short strokes made by the wrist and fingers and the long stroke, which contains all the short ones, by the aid of the forearm movement. In playing this staccato, the elbow may be raised a little higher than usual. If the hair of the bow is watched, it will be seen that, between each note played, only the edge of the hair remains on the strings, while the whole width is used in playing the note, the bow always remaining in its slanting position. This effect of the hair is caused by the pressure and relaxation of the first finger. Of course the amount of bow used for each slurred staccato note is extremely short; otherwise it would be impossible to play many notes in one bow. Staccato can be played with an up or down bow, but the up-bow is preferred to the down, the latter being far more difficult. In playing staccato with the down-bow, the difficulty is not so great when commencing at the heel, but it increases as the centre is approached, this part becoming so light, that articulation becomes most indistinct. It is a good plan to grasp the lower part of the bow more tightly, but without interfering with the freedom of the wrist. Then gradually loosen the hold as it goes to the point. The G string is the most fav-

ourable for the practice of down bow staccato, and the E the most awkward. The conditions for a neat staccato are: a perfectly free wrist; proper hold of the bow; faultless balance from the fourth finger; precision; even pressure on each note; a strict observance of time and lightness; and, finally, avoidance of haste when first practising this bowing. It can be practised on any open string or easy scale, taking two notes as very slow crotchets and making a crotchet rest between each note—first, a separate note for each bow, then two in one direction of the bow. After a time the speed can be increased. It should be observed that the bow does not leave the strings during the rest. This simple exercise is a fine foundation for good staccato. *Slow and sure* should be the motto for all students.

### **Martelé.**

*Martelé* or hammered bowing is a form of solid staccato and is a fine preparation for staccato. The notes receive a hard, quick and strongly accented stroke, hence the name. *Martelé* can be played at any part of the bow, and *grand martelé* with a whole bow stroke. It strengthens the wrist, the forearm, the muscles of the hand, forefinger and thumb. If played at the point of the bow, the latter should be held firmly between the fingers and receive strong pressure from the first finger. Then make the stroke from the forearm, or a disagreeable grating noise will result. Be careful that the wrist is not too rigid.



The up stroke, being weaker, requires a little more pressure. The amount of bow used when playing at the point varies; it must not be too little. About one-eighth of the bow will prevent harshness. For *piano* effects the extreme point may be used, for a *forte* a large quantity. A *martelé* note is really robbed of its value, the remainder being taken up by a rest. The stroke must be firm and strongly emphasised, and the bow brought to a stop sharply, so that vibration ceases at once. This is followed by a pause during which the bow remains on the string. When playing at the nut, which is splendid practice for obtaining a free wrist, no pressure is required from the forefinger, owing to the weight given to the bow by the hand. Let the bow lie on the strings and move with a sharp jerk from the wrist only.

*Grand martelé* or whole strokes are not used to any great extent, being clumsy. But they are fine practice and should no no account be neglected. Practice slowly at first and take care that the pauses between each stroke are well marked; play with the side of the hair. In making this full-length stroke, the pressure comes from the wrist and forefinger, not from the elbow. *Martelé* is indicated by dashes under or over the notes.

### **Spiccato or Springing Bow.**

*Spiccato* is another form of staccato, and is generally used in light and quick passages. It can be played in several forms under different names, these

forms being determined by the *tempo* and *tone* required. In the methods of bowing previously dealt with, the bow hair always remains on the strings, but with spiccato the bow leaves the string. It may be aptly described as a *stutter* of the bow on the strings, and can be played both *piano* and *forte*. One writer very finely compares it with the action of a rubber ball dropped on the floor, allowed to bounce, and then kept continually bouncing by patting it with the hand. Although this bowing may appear simple of execution, it is not such an easy matter as it appears. The best part of the bow to commence with is the middle, where it has the most spring. All action must come from the wrist and use of the first finger, which gives a slight pressure against the thumb. Speed is regulated by the rapidity with which the bow bounces on the string. The forearm and upper arm are only used when changing from one string to another, and the movement of the wrist is very limited. Avoid raising the arm, although there is a strong temptation to make it assist the wrist; this kind of bowing is hampered and very unsatisfactory if the arm is employed. A good method of obtaining spiccato is to place the bow at about the centre, lift it slightly, and then let the wrist and grasp of bow relax. This will throw the bow on to the strings and cause it to bounce. Catch the bow up at its recoil and repeat the slight throw or bounce until a regular stutter results. Another method is to play a series of quick staccato notes lightly on one string, from

the wrist, gradually increasing the speed and shortening the stroke of the bow; this will become a spiccato if sufficient speed is attained.

For all forms of staccato and spiccato the bow-hair may be screwed up a little more tightly and a flatter surface of hair brought on to the strings. For production of a louder tone the bow will have to be used below the centre, and in a *forte* the forearm must be allowed to assist the wrist to a slight extent, by moving with it; this will make the tone fuller and louder. As the playing of springing-bow approaches the nut of the bow the mode of production will alter. For the light and soft style of playing the upper half of the bow from about the centre is used; as already explained, the wrist is here employed. In using the lower half of the bow it is lifted higher from the strings and has longer strokes with the wrist aided by the forearm, to be used mostly in *forte* passages. Should *forte* passages be played with the centre the resistance of the bow hair would not be sufficient to prevent contact with the stick. To obtain a *crescendo*, *decrescendo* or *sforzato* the bow should be changed by moving to the lower half; this can easily be done by practice. In some cases where a slight *crescendo* only is required it can be produced by raising the bow higher. The *sforzato* can be made very effectively by stopping the spring of the note and playing it as an ordinary detached note, with the wrist giving a firm pressure of the bow. It is sometimes difficult for the beginner to recognise where spiccato is necessary, as it is

marked in the music with dots exactly like staccato. The character, expression marks and speed of a piece will generally decide, but the majority of well written solos have, in addition to the dots, such words as *sautillé*, *saltato*, *leggero*. Practise this bowing first on open strings; then go on to simple scales, first playing one note to each bounce of the bow and gradually increasing to as many as possible.

### Arpeggio Spiccato.

*Springing-bow arpeggio* is another form exactly similar to spiccato; it consists of several notes forming an arpeggio over the strings and played in one down or up stroke of the bow. The bow is made to bounce over these strings, touching each slightly, clearly and with precision. It is used to a very great extent in variations and as an ornamental bowing. Many describe it as a "knack," but a "knack" has to be learned. Commence by taking the three open strings G, D, A. Hold the bow lightly and see that the wrist is as free as possible. Use the centre of the bow and lift it from the strings; then let it fall with the full width of the hair on the G string, giving the wrist a slight downward movement and using very little bow; this will cause the bow to bounce over the G, D and A strings. Catch the bow up from the A string as it rebounds and, for the return up-bow, give a quick accent from the forefinger and wrist, which will cause the bow to rebound and send it back over the D and G. The same method

can be followed over the four strings. Another way of mastering this bowing is simply to slur the three or four open strings with the upper part of the bow, keeping the wrist and elbow of the right arm rather stiff. If this is done at any speed it will be found that the bow begins to bounce of its own accord. A method advocated by some teachers is to cause the lower part of the forearm, near the wrist, to strike the groin at every down bow, keeping the muscles of the right arm stiff. It is possible to produce a *crescendo* in *arpeggio spiccato* by playing nearer the nut of the bow and for a *decrescendo*, or where speed and lightness are required, just above the middle.

### Triplets.

Triplets, especially if detached, need care and clearness in execution and bowing. A common fault is to play the notes unevenly, as one long and two short notes instead of three of equal length. For detached triplets the upper third, middle or point of the bow will be chiefly used. The length of the stroke will depend on the speed of the composition and on the player's judgment. Owing to the shortness of the strokes the pressure will of course be greater and will be produced with the forefinger, the strokes in many cases being given by the wrist. The pressure must be stronger when the point of the bow is used, owing to the lightness of the stick. With all detached triplets a slight accent should be made on the first note of each group; this helps to give a

uniform rhythm. Rather more bow can be given to the first note, using the forearm slightly; the other two should be played with the wrist. Triplets should be practised at all parts of the bow; they are very beneficial. Use the open strings first; then follow with scales *forte*, *piano* and *mezzo-piano*. An excellent introductory exercise is No. 57, with the three bowings given, in Tours's "Violin Tutor." Like all other bowings they should be studied slowly at first, as too great a speed in the early stages will tend to indistinctness.

### Distribution.

By the term *distribution* is meant the proportioning of the bow for notes of equal and unequal length both slurred and detached. Evenness of tone throughout a piece is of great importance; the length of bow used must therefore be so equalised as to agree with the value of the note played. This is a fairly simple matter when passages are composed of detached semibreves, minims, crotchets and quavers, because in such cases the semibreves would have whole bows, the minims half, and so on. The bow strokes would be diminished in proportion to the speed. Thus in quick passages of notes of unequal value, or of equal notes which are to be partly slurred and detached, the forearm would be used for the longer notes, while a wrist movement would be sufficient for those of lesser value. In the case of slurred notes of unequal value, for instance, a dotted quaver fol-

lowed by a semiquaver, we should have a combined bowing stroke, smoothly connected, of the forearm for the quaver followed by the wrist for the semiquaver. As already pointed out, this movement and bowing would depend on the *tempo*. It sometimes happens that, to obtain equal distribution, the player has to alter the bowing although no indication is given. When this occurs, several notes are played in one direction of the bow so as to bring the bow into position for a long up or down stroke. Many passages are specially marked to be played in this manner and will frequently be seen in a succession of dotted notes unslurred. Kayser's Studies Nos. 23 and 32 are fine exercises for this kind of bowing; they can be played very near the point of the bow, but if a broader tone is required the upper third can be used. The former method (at the point) is played with the wrist, taking a stroke to each note, one down-stroke for the quaver and another down-stroke for the semiquaver; both must be wrist strokes. The next two notes will be wrist up-strokes. The quicker the *tempo* the less bow will be used, but both notes should be quite distinct from each other.

### **Arpeggi and Chords.**

Arpeggi and chords are practically the same, the former being simply the notes of a chord played separately. They may be short or to a certain extent sustained, and may consist of three notes or four. To play them well is a difficult matter and requires

a good ear. Many violinists play them out of tune owing to careless fingering. It should always be remembered that the use of each finger affects the placing of the next. A chord should be built up carefully, first making sure that the fundamental note is perfectly in tune and the hand firmly fixed in position; then the next finger should be placed and both notes tested together. The same method can then be applied to the remaining notes of the chord or arpeggio. Keep the knuckles of the left hand well over the strings; this will assist the fingers to fall easily into position. In practising arpeggi they should receive as much attention as scales, and should be played in detached bows, slurred in groups of two, three or six notes, etc. Open strings should be used as much as possible, both ascending and descending. Keep as many fingers down as can be done with comfort. If the fingers have been trained to keep down on the strings, playing is made considerably easier. Stretching the fourth finger is a very useful accomplishment to master; care must be taken when using this finger to form a double note with a lower finger already placed, that the latter is not pulled out of position. In bowing a chord on three strings, strike them as near together as possible, the centre one receiving more pressure than the others; this can be done by the management of the wrist and forearm. The wrist and forearm make the attack and are followed up by the elbow and upper arm. Power and weight must not come from the forefinger, but from the hand and bow. Keep the



wrist well up and the bow raised over the strings, and strike so that the bow is brought down with a slight slant. Don't "whip" the strings or prolong the upper note of the chord. For a *forte* chord the bow should be used near the nut if a down-bow, but from the point if an up. As a general rule about one-third of the bow is used. In four-note chords the arm should be used more freely. *Piano* chords can be played almost as quick light arpeggi; lay the bow on the strings for these and use slightly more bow. When playing sustained chords it is, of course, impossible to sustain more than two notes of the chord. The lower notes can be commenced with the wrist chiefly; the sustained ones need the addition of the forearm and a fairly firm pressure. Sustained chords with the up-strokes can be played from the wrist with the upper part of the bow—keeping the arm low and the wrist high. In reading arpeggi and chords a knowledge of harmony will be found of great assistance.

### **Double Stopping.**

Double notes on the violin should present no more difficulty than single ones. After all, it is only a matter of the angle of the bow on each string. If the bow is kept at a certain slope for the G, D, A or E string, it should be simple to find the angle necessary to touch two strings. It would be a good thing if the method of Sevcik's great "School" were generally adopted, and all beginners taught to bow

on double open strings after mastering single ones. The real difficulty in playing double-stopping is to play perfectly in tune and to continue the sound of both notes equally. Many double-stops are difficult owing to the awkward position of the fingers; when placing the fingers in position care must be taken not to allow those which are stopping certain strings to touch neighbouring ones. For example, in playing a chord with the E and D strings stopped and the intermediate open A to be sounded, the beginner finds it very difficult to avoid touching the A string and thus interfering with its vibration. The fingers should be as ready to fall into position on double notes as on single ones. When changing the bow from one string to the other it should not be lifted. It is well for the beginner to commence with double open strings playing them with sustained bows; then four crotchets with a half bow to each, eight quavers at the centre of the bow, and so on. He should be careful to observe that the bow remains at the proper angle to keep on the two strings. After two open strings, one stopped with one open string can be taken in the various bowings. Then can follow thirds, which should receive careful attention; they should be played as softly as possible. Above all, avoid pressing one string to make it level with the other. Always place your finger tips on the strings and commence by placing the finger for the lowest note first, sounding it to see that it is perfectly in tune; then test the upper one, and finally play them both together. The lower notes should be held

firmly, especially in octaves and tenths, which are so difficult to play in tune. There is no branch of violin playing which requires so much care and practice as double-stopping, and a student cannot practise this delightful part of his study too much.

### Fingering.

Fingering naturally presents more difficulty in playing double notes than single ones. It is a golden rule to be strictly observed *that fingers should never be raised from the strings unless it is absolutely necessary*. The value of this will be obvious if the same notes are required again, for if the fingers are allowed to remain in position, the notes are ready formed. Again the placing of several fingers will more effectually stop a string than one finger only; for example, if C on the G string, G on the D string, D on the A or A on the E string are required, the three fingers must be so placed in position on that particular string that each finger is in its appointed place for a note in the key of the piece. It is very unsettling to take up the fingers unnecessarily, as to do so will in some cases disturb the fixed position of the hand. Remember always to keep the finger down on a note until it has been played and received its full time-value, and continue when possible to keep it down until the following note is stopped. In many passages this will help considerably in rapid execution, especially when notes are required on adjoining strings and are repeated alternately. Keep

the tips of your fingers firmly pressed on the strings and let them fall decidedly and exactly into their correct places, but do not let the nails touch the strings. Always have your fingers ready when crossing from one string to the other, exactly at the time you move the bow. Beginners are apt to lift their fingers before crossing to an adjoining string, with the result that an open string is sounded. Be careful when placing the first finger for F natural on the E string; there is a strong tendency for beginners to make this note too sharp. Special attention should always be paid to bowing, expression and fingering marks.

The practice of the fourth finger should always receive the greatest amount of attention; it is a very weak finger, but a very useful one and will often save much shifting into a higher position, by giving the player a command of extended notes. Many when commencing the practice of easy scales omit the use of the fourth finger, except on the E string; this is a mistake. It would give more confidence, and be good practice for the little finger, if all open strings were omitted and the notes played with that finger. In any case *it should always be used in descending scales*. With some, the little finger appears too short to reach the strings, especially on the G string; but if the elbow is brought sufficiently under the violin, so that the hand is well over the strings, this imaginary difficulty will disappear. An excellent exercise for stretching this finger is to take the notes in the first position on each string, using the

fourth finger to get the note of the open string adjoining; then, still keeping all the other fingers in position, extend the fourth a semitone higher. For example, play on the G string G, A, B, C, D, D sharp; then return, playing D sharp, D, C, B, A, G. Do not move the other fingers out of place; keep the hand firmly in position. The same method can be followed on the other strings, using varied bowing. When this succession of notes has been mastered alternate notes can be tried.

There are many ways of fingering various passages in a piece and it would be as well for the advanced student to try over several, until the easiest has been found. The fingering of these passages will vary according to the string used, but before changing the fingering the student must be thoroughly conversant with the recognised method. In marking his own style of fingering he must use his own taste, being guided by the character of the music, *tempo, phrasing, facility and tone-colour*. The facility of a particular fingering will depend largely on the physical formation of the player's hand and fingers. In long ascending scale passages make the fingering for change of position before reaching the higher strings; it is not good to leave all the climbing for the E string! When playing arpeggi and broken chords, divide the notes between two or more strings rather than change position. For a series of chromatics keep to the fingering marked!

Every musician worthy of the name must understand phrasing and know something about cadences.

Badly phrased music is utterly devoid of meaning. Pick out the phrases and make them "speak." The study of an old melody, of which the words are known, will be a valuable guide.

Lastly, tone-colour will be determined by the quality of the instrument, observance of expression marks and choice of string. Each string has its own characteristic tone; hence famous compositions have been written for special strings and, if played on others, they lose their beauty. The fingering and knowledge of the positions will be of great help in this matter. It sometimes happens that facility has to be subordinate to phrasing, as the latter stands above everything else in importance. Always avoid open strings by using the fourth finger wherever possible. Harmonics should also be used very sparingly. Very often one finger has to do duty for two notes, both in rapid passages, where repetition of the notes is constantly needed, and for double notes—especially perfect fifths. The violin being tuned in perfect fifths, all perfect fifths can and should be played with the same finger. To do this correctly the fingers must not be placed sideways, but should remain in their natural position with the tips on the strings. Accurate gauging of the strings is an important factor in perfect intonation. Perfect fifths are played as double stops either with the first, second or third finger, according to what the notes of the fifth may be. The little finger is rarely used, owing to the small surface of the tip of the finger. Intervals of seconds are sometimes played with the second and

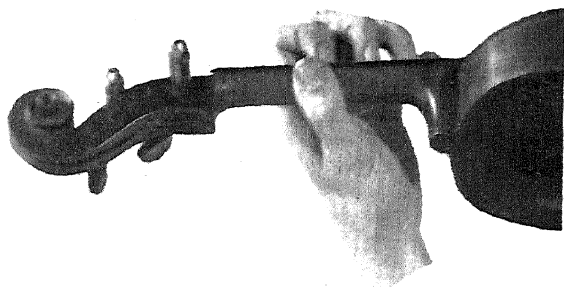
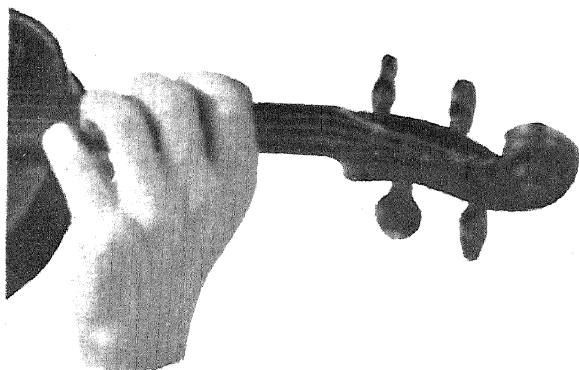


PLATE XXXIV.

HAND AND FINGERS PLACED IN THE SECOND POSITION.  
FIG. 1, FRONT VIEW; FIG. 2, BACK VIEW.





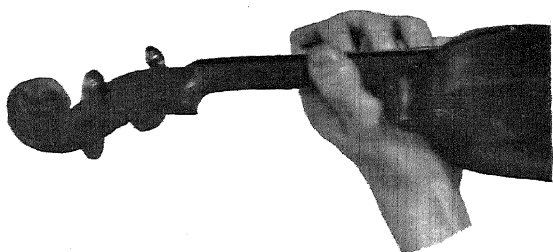
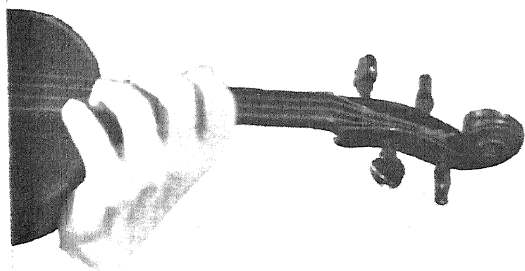


PLATE XXXV.

HANDS AND FINGERS PLACED IN THE THIRD POSITION.  
FIG. 1, FRONT VIEW; FIG. 2, BACK VIEW.





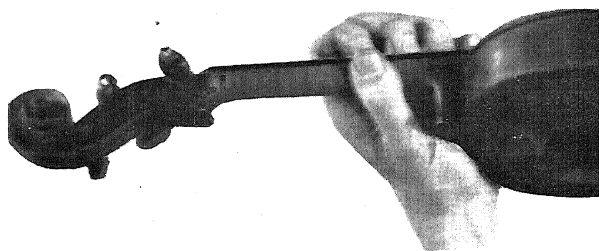
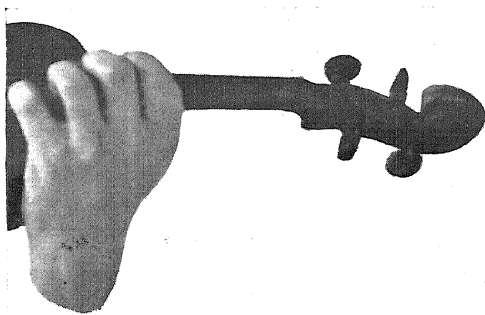


PLATE XXXVI.

HANDS AND FINGERS PLACED IN THE FOURTH POSITION.

FIG. 1, FRONT VIEW: FIG. 2, BACK VIEW.

fourth, or first and third fingers; this of course depends on the passage played. In a succession of thirds keep the first and third fingers down on the strings till the second and fourth fingers have been placed firmly in their places above them on the strings. Do not slide the finger when making notes in the first position or any fixed position of the hand. It is unpleasant and betrays a doubtful ear if the player has to make the fingers slide until the correct pitch of the note is found. The slide proper is very beautiful, but this vulgar wailing has nothing in common with it.

### The Trill or Open Shake.

The trill is a very beautiful embellishment if not abused, and gives strength to the fingers of the left hand. Many players spoil their chances of becoming proficient in this grace by attempting too rapid a trill at the commencement; if this is done the shake will always be weak and feeble. No. 14 of Kayser's Studies, Nos. 14, 16, 18, 19, 20 and 21 of Kreutzer's, and Nos. 2 and 6 of Fiorillo's are all excellent for the cultivation of the open shake. Perfect intonation is absolutely necessary. The finger making the shake should be raised high and allowed to fall like a hammer on the string, evenly, firmly and *slowly at first*. The first and second fingers are the easiest to trill with. The difficulty with a beginner is to move the finger up and down evenly; some ignore the correct distance, a tone or a semitone shake.

Equality is highly important, not only in regularity of beats, but independence of fingers; all *crescendos* or *decrescendos* can be regulated with the bow. Stiffness should be avoided and the shake finger well raised. The turn which follows the shake should be finished off evenly and smoothly. In practising, use all fingers, beginning with the first and second, then second and third, and finally with the third and fourth. The latter fingers will be greatly strengthened on a shake by practice. A splendid method is to trill on an open string with the first finger, commencing as slurred crotchets and increasing the speed gradually until the notes become so quick that they cannot be counted. But this must be done very gradually, mastering the crotchets and quavers first, then the semiquavers and demisemiquavers. Haste will lame the fingers and make it impossible to acquire an artistic trill.

### **Trills in Double Stops.**

Trills in double stops are practised in the same manner as ordinary trills, playing very slowly at first and increasing the speed afterwards. Each double stop should be made with force, the two fingers working together. Shakes in sixths are seldom used. They require special fingering and are not subject to a fixed position.

### **Vibrato or Close Shake.**

*Vibrato* or the close shake, is another form of shake or trill. The finger remains on the string, rising and

falling, but without actually leaving it. Though very effective if judiciously introduced in a composition it is overdone by many players; instead of their *mastering the vibrato*, the *vibrato has mastered them*. Students are eager to learn this grace, and when applied with taste it is delightful. But to introduce it on every note of any length is sickly and cloying and has the effect of a stuttering man attempting to give a recitation. Many students spoil their chances of becoming proficient in this ornament by attempting too rapid a shake at first; if this is done it will always be weak and ineffective. Like the beats in the trill or open shake, the movement of the finger should be made slowly at first and then gradually quickened. This is excellent practice on a long note which has to be played *crescendo* and *diminuendo*. Perfect freedom must be obtained in the left hand and fingers, with a light touch. The fingers must be well over the strings and the thumb well under the neck of the violin. The hand should be free of the neck and ribs, except at those parts touched by the fleshy part of the thumb and the point of the finger in use. Place the finger which is to make the shake, and gently quiver the other fingers which are not in use all together. The finger must not be pressed firmly upon the string; this would hamper its free movement and stiffen the hand. The greatest care should be taken that no other finger presses on the string but that used for stopping the *vibrato note*. Another method is to press alternately lightly and then firmly on the string with the finger which

is making the note; but the former method is decidedly the more satisfactory. It is a good plan to commence the practice of the close shake in the third position, playing with the first finger on each string. In this position the beginner gets the support of the ribs of the violin for his wrist, thus allowing the first finger perfect freedom. This should, of course, only be used during early practice of the vibrato. Vibrato can be practised apart from the instrument by the aid of a flat, narrow piece of wood held in the same manner as if fingering the violin.

### **The Slide.**

The slide, called by many the *portamento*, is constantly used in violin playing, especially when shifting from a lower to a higher position. It is a smooth gliding of the finger to a note or notes above, very often a harmonic. A very effective use of this can be made by sliding the finger up the string till the disengaged fourth finger is over the harmonic to be played, and then sounding the latter. In sliding, hand and fingers should move as one. Do not make a slide on the first note of a phrase or from an open string; it sounds abominable. Portamento should never be taken so slowly that it sounds like a whine or cat-call. One finger only should be on the string. Do not audibly slide from the end-note of a phrase or theme to the first note of the next phrase. The violin should be held firmly with the chin, so as to prevent slipping when the hand moves.



## CHAPTER X.

### THE POSITIONS.

TO be considered an efficient violinist the student should be capable of playing in all seven positions as well and as comfortably as in the first. Until complete mastery has been obtained in the first position, it is useless to attempt any of the higher ones. Intonation must be perfect in the first before it is safe to trust the hand higher up the fingerboard, for the shifting of the hand causes serious defects in intonation, due to the pupil's tight grasp of the neck of the instrument. There are many positions on the violin, so that it is difficult to state definitely the exact number, but for general purposes seven are sufficient. A violin of great clearness is required for the extremely high shifts, and without such an instrument it is practically useless to attempt to practise positions above the seventh. The movement of the left hand from the first position to any of those above, and vice versa, is termed "shifting." The positions constantly used are the *second*; *third* and *fifth*. Music of average difficulty demands a knowledge of

these. When playing in the positions the hand and thumb must remain motionless and the left arm well under the violin. The instrument should be held steadily with the chin on the chin-rest. A beginner should never lose his hold of the place where the first finger rests, unless it is absolutely necessary; the rule should be observed that *no finger should be taken off the strings unless it is quite unavoidable*. If in passing from a low position to a higher one, the correct note is not reached, it is advisable to shift the hand back and repeat the movement until correct. The chin-rest allows the hand freedom to move. Some players have a habit of bringing the left shoulder forward when shifting. This is wrong and should be guarded against. Every shift must be done swiftly and as certainly as possible; no feeling for notes should be heard. Do not press the thumb and first finger against the neck of the instrument, but let the neck rest naturally between them. The higher the position above the third, the farther will the thumb come under the neck-block. Always use as many positions as possible, according to the character of the music; they add beauty. But, above all, avoid *sliding and whining*, from a mistaken idea that it is expressive. The use of the positions and slide must be tasteful, not overdone and cloying. A simple but extremely useful book, which can provide an introduction to more difficult exercises, is Basil Althaus's "Seven Positions of the Violin" (Pitman Hart and Co., Paternoster Row).

## The Second Position.

In studying the positions it is generally considered easier to avoid the *second* position at first and commence with the *third*. This is because the *second* position, or as it is sometimes called the *half-shift*, is the more awkward, owing to the fact that the left hand has no support or guidance. The *third* position is certainly more satisfactory to study at first, as the left hand receives assistance from the violin. A part of the palm of the hand will touch the edge of the back projecting from the ribs of the violin and this serves as a useful guide. But, after all, the difficulty of the second position has to be overcome sooner or later, so why not commence at once? It appears to be a very neglected position in comparison with the other, but it is extremely useful and the student would be wise to devote as much attention to it as to the others. As every position is set to a certain scale, caused by the hand advancing one note at a time into each position, it is well to practise the scale to each position, commencing with that of the *second position* C major. The left hand and fingers are advanced one note up the fingerboard, the thumb being placed opposite the first and second finger as in the first positions. In short, the hand is set to position in the first and advanced one note, so that the first finger falls on B on the G string, instead of on A as in the first position. In practising, commence with an open string; then shift into the second position and play the first finger. Or the student

can start right away in the second position. Both ways should be practised on each string. This exercise can be followed by placing the second finger in the same manner—both shifting and in position—as has been done with the first; then use the third and fourth. When the third finger is used, the note can be tested with the adjoining string to see that it is perfectly in tune. Chromatics can then be tried, and finally the scale of C major in various bowings. When moving up from the open strings into this position, move the hand easily and not with a jerking motion; no break should be heard in changing from one position to another. To place your hand in position, put down the first finger on the G string for B, second finger on the D for G, third finger on the A for E and fourth finger on the E for C. (Plate XXXIV, Figs. 1 and 2.)

### The Third Position.

The next position is the amateur's paradise, the *third*; it owes its popularity first to its simpleness of mastery, and secondly to the effects obtained by extending the fourth finger both for harmonics and for extended stopped notes. The fingering is more natural and the position of the hand much easier. The hand is advanced two notes up the fingerboard, so that the first finger falls respectively on C on the G string, G on the D, D on the A, and A on the E. In thus moving the hand it will be found that the palm of the hand near the base of the thumb touches

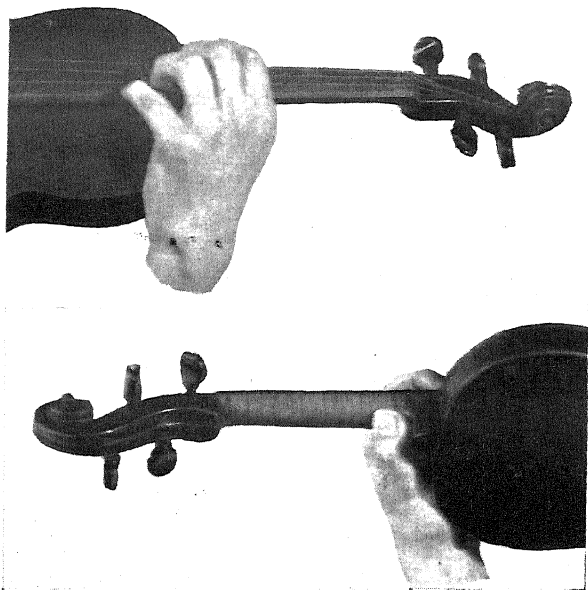


PLATE XXXVII.

HANDS AND FINGERS PLACED IN THE FIFTH POSITION.  
FIG. 1, FRONT VIEW ; FIG. 2, BACK VIEW.





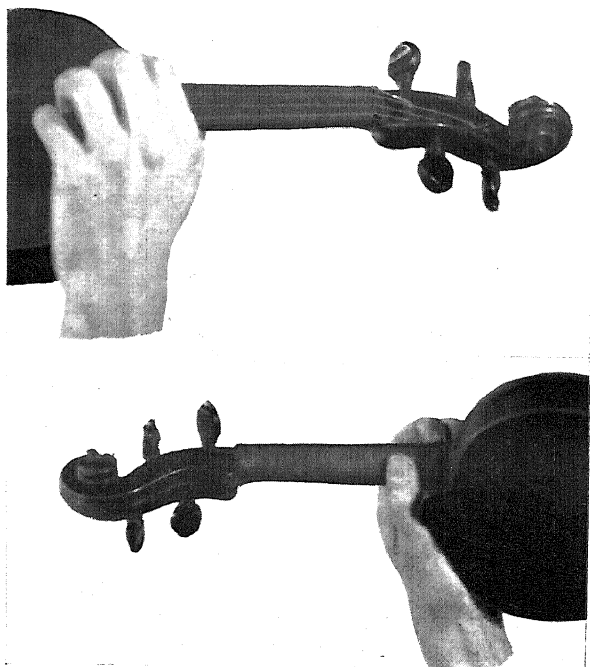


PLATE XXXVIII.

HANDS AND FINGERS PLACED IN THE SIXTH POSITION.

FIG. 1, FRONT VIEW: FIG. 2, BACK VIEW.



the ribs or outer edge of the instrument for the first time, which is a sure guide in placing the hand correctly. By the aid of the third position a complete octave can be played on one string. In shifting from the first to the third take care that the wrist is kept in a straight line with the forearm when ascending; but, in returning to the first, it may *momentarily* turn in towards the neck.

This position is naturally in the key of D major and there are two or three methods of practising it. Play open G, and the notes following in the first position, A, B and C (the latter with the third finger); then move the hand up until C is played again with the first finger in the third position. Follow with open D string in the first position, move the hand again up into the third and play D with the second finger on the G, testing it to see that it is perfectly in tune. Now come back to open G again and shift up, bringing the first finger on C. This can also be practised on the other open strings in the same way. When this can be done easily and correctly, the complete series of notes on each string may be played, e.g., on the G, C with the first finger, D with the second, E with the third, and F with the fourth. By extending the fourth finger on each string, and playing the correct sharps, each series can be played as a complete scale of one octave, the scale of G major on the G string, D on the D, A on the A, and E on the E string. The rule of keeping all the fingers down must be strictly adhered to except when making an harmonic extension of the

fourth on each string; in that case all fingers are raised, except the little finger, which must touch the string very lightly for the harmonic extension. Remember when shifting that the neck of the violin must on no account be clasped tightly.

### **Stopped and Harmonic Extensions.**

In writing of the third position it will be as well to explain the three extensions. They are: the "stopped extension" with the fourth finger, the others remaining down; "the harmonic" with the fourth finger only extended, the others raised, and the finger placed as lightly as possible on the string, giving the octave of the string; and, finally, the "back extension." *The harmonic extension* is marked by a small o over the note. Harmonics can of course be played with any finger, but it is as well to use the fourth finger only at first as the harmonics produced in this way are the easiest. The note produced is the same as by the stopped extension, but the quality of tone is flute-like and can be used with effect at the end of a phrase.

In the "back extension" the first finger is drawn back a semitone lower to avoid shifting the hand out of position and to facilitate speed. It must be observed that only the first finger moves, not the hand. When shifting from the first to the third position, be sure that the whole hand moves at once; and let the thumb remain in the same manner as for the first position.

## Character of Notes and Scales.

In using the different positions another point which must not be overlooked is the character of the notes. The same notes played in various positions have different tone-qualities. Each position has a special tone-characteristic, and there is a marked difference between the same note in the first and second positions, though with some notes it is less noticeable than with others. This is because each string has its own peculiar "timbre," as it is termed. The G is broad, strong, sonorous and vibrant. The D is less so and its notes, beyond the third position, are slightly muffled. The tone quality of the A is clear, brilliant and reedy. On the E the notes are penetrating and clear. It can be seen from this how important the fingering of a solo is. The particular scale natural to each position (for the first G major, the second C major, the third D major, the fourth E major, the fifth F major, etc.) has its own tone quality. The character of sharp keys is chiefly bright, while flat keys are of a more dramatic, solemn or plaintive quality. A good composer takes this into consideration. The open strings have quite a different effect from that of the same notes stopped with the fourth finger.

The character of the scales in each position has been given by a well-known violinist as follows:—

First position, G	major &	sonorous and strong,
	minor	all the strings.
First position, G#	„	very difficult, dull and
		without vibration.

First position, A	„	sonorous and strong over all the strings.
First position, A $\flat$	„	difficult but effective.
First position, B	„	brilliant to a certain extent.
First position, B $\flat$	„	sonorous.
Second position, C	„	strong, effective.
Second position, C $\sharp$	„	strong, but veiled.
Third position, D	„	fairly easy, brilliant everywhere.
Third position, D $\flat$	„	difficult, veiled.
Fourth position, E	„	tendency to monotony.
Fourth position, E $\flat$	„	difficult, veiled on everything.
Fifth position, F	„	brilliant, with variety of tone.
Fifth position, F $\sharp$	„	difficult, sonorous to a certain extent.
Sixth position, G	„	difficult.
Seventh position A	„	very difficult.

In placing the fingers on each string in the third position, the first finger comes on  $\hat{C}$  on the G string, the second on A on the D string, the third on F on the A string, and the little finger on D on the E string. (Plate XXXV, Figs. 1 and 2.)

### The Fourth Position.

Leaving the third position, we now come to the fourth. The same method can be followed with this position as with the second and third, but the thumb must be brought more under the block at the base of the neck of the violin. This is necessary in order to give the fingers command of the strings by being placed well over them. Fingers in all positions must

fall upright and they will come closer together as the hand is moved higher. A very good way of shifting from the first position into the fourth is to keep the first (or any finger which is being used at the moment) on the string, and to slide the hand as closely as possible against the ribs of the violin, without bringing the thumb in under the neck. This will bring the fingers into the fourth position and the thumb can then be rightly placed. To place the hand correctly for the fourth position, play D with the first finger on the G string, B with the second on the D string, G with the third on the A string, and E with the fourth on E string. (Plate XXXVI, Figs. 1 and 2.)

### **The Fifth Position.**

In the fifth position the fingering on each string is the same as in the first—but a string lower. (This refers to the fingers used, not the intervals.) This position is the next easiest to the third. The thumb should be placed in the same manner as for the fourth position, but if the student's fingers are very short the thumb can be brought still further under the neck block.

Follow the same order of practice advised for the other positions, and then work at the complete scale of F major, to which the position is set. In shifting up or down into this position, it is best to take two shifts in scale or gradually ascending passages, first to the third position, and then to the fifth. There

are, of course, many passages where it is possible to shift directly from the first to the fourth or fifth positions, without any assistance from intermediate ones. In the fifth position the hand is advanced until the fingers fall on each string, forming the notes, E (first finger on the G), C (second on the D string), A (third on the A string), and F (fourth on the E string), (Plate XXXVII, Figs. 1 and 2). It is advisable for the student to remember that as a general rule *in shifting from the first position, no matter on what string, it is safer to shift by the third, fifth, seventh, etc.; i.e., by alternate positions.*

### The Sixth Position.

Now we come to the least used and least serviceable position, the sixth. The neglect of the sixth position is due to the fact that the fifth can be used to take its place in many cases; but it must be learned, none the less. It will be noticed how close the fingers are in this position. Practise with the scale of G major, commencing with the second finger on the G string, which gives the octave of the string. In playing all positions beyond the second, the extended compass of the notes on the E string should be carefully noted, as more and more are added with each position; they are strange to the beginner at first, owing to the number of ledger lines. If found necessary, the thumb can be brought still further round the neck-block, so that the notes on the G and D strings are well under the fingers. Placing a

finger on each string, the hand is set to the position and the fingering is as follows: F (first finger on the G string), D (second on the D string), B (third on the A string), and G (fourth on the E string). (Plate XXXVIII, Figs. 1 and 2.)

### The Seventh.

Although there are higher positions on the violin, only seven are commonly used. In the seventh position, by the aid of the fourth finger extension, the student commands two positions and the harmonics B, E, A or D—according to the string played. The placing of the fingers is *the same as in the third position*. Here again the scale of A major should be practised, commencing with the second finger on the G string. The position of the hand may cause a cramped feeling; this should not be so if the fingers can fall naturally on the strings. Each position should, with practice, be as comfortable as the first. With this position and the higher ones, a change is made in the left hand. The inside of the hand frees itself, to a certain extent, by not leaning or pressing against the violin, except with the palm—which is unavoidable. The thumb still retains its position by the neck-block, and attention should be given to prevent its suddenly slipping and causing trouble while playing. The fingering on each string, to place the hand in position, is G (first finger on the G string), E (second finger on the D string), C (third finger on the A string), and A (fourth finger on the E string). (Plate XXXIX, Figs. 1 and 2.)

In order to master the positions, it is a good plan to take a simple and suitable piece and play it through entirely on one string. This will result in a thorough command of all notes in all shifts and over all strings. Many poor players can climb into a high position on the E string only. Ask them to play other notes on the G, D and A strings and you will be astonished at their incompetence.

### **Skips.**

It often happens that a very low note is followed by a very high one, or *vice versa*. When these skips occur, *play the high note with an up bow and the low note with a down bow*. The second book of Kayser's "Thirty-six Studies" is useful for the practice of the first, second and third positions. Hans Sitt's studies afford fine practice for the fourth position, and Campagnoli's for a more advanced student. The studies in Spohr's "Violin School" give some magnificent work in all positions. None of these studies should be attempted until Basil Althaus's "Seven Positions" have been mastered.



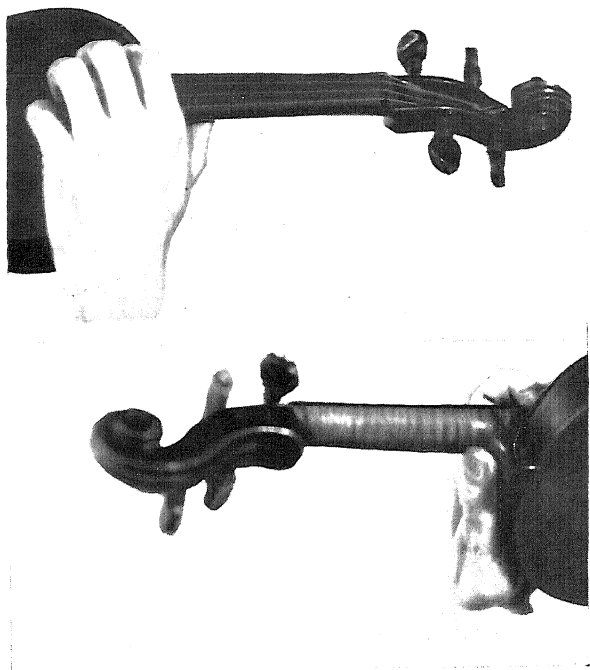


PLATE XXXIX.

HANDS AND FINGERS PLACED IN THE SEVENTH POSITION.  
FIG. 1, FRONT VIEW; FIG. 2, BACK VIEW.





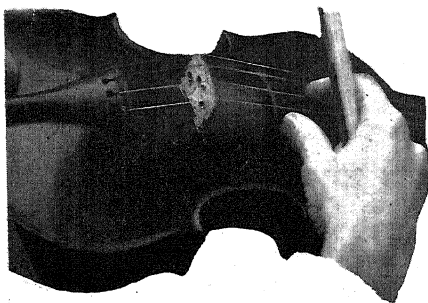
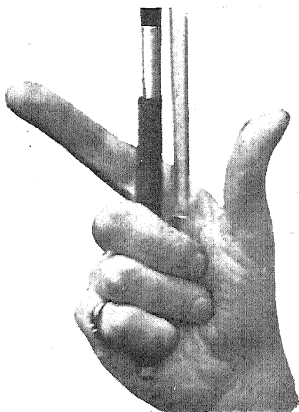


PLATE XL.

FIG. 1, POSITION OF THE BOW AND FINGERS FOR PIZZICATO. FIG. 2, MANNER OF USING FINGER AND HAND WHEN PLAYING.

## CHAPTER XI.

### HARMONICS, PIZZICATO AND OCTAVES.

THE study of the positions has already necessitated mention of the octave harmonics of each string. We must now explain, at length, the nature of harmonics, their production and their place in violin playing. Paganini, that weird genius of the violin, astonished the world by his harmonic effects, then practically unknown. By sliding up the first finger together with the fourth on a string, he played entire melodies in harmonics and obtained, on an average, a compass of about three octaves on each string. His use of double harmonics and the playing of four simultaneous A flats are feats which, even in modern times, have never been surpassed. The labour he must have spent before he could so command these harmonic notes, can be imagined by the violin student. Their beautiful clearness and strength were such that they sounded as full and powerful as stopped notes.

### **Guhr and Paganini.**

Guhr, a famous violinist of Frankfort, made a close study of Paganini's peculiarities of playing and classed them under five heads:—

1. His manner of tuning the violin.
2. His management of the bow, entirely peculiar to himself.
3. His mode of using the left hand in passages of a singing character.
4. The frequent and wonderful manner of employing harmonics.
5. The art of putting the violin to a double use, combining simultaneously with its own usual sounds, the effects of a mandoline, harp, or other instrument of the kind, whereby one seemed to hear two different performers.

Under these headings, Guhr reduced to a system the results of his investigation, and brought out a work which was translated into English and published as "Paganini's Method of Playing the Violin" (Novello). This book is extremely interesting, but does not convince one of its practical value. Many of the difficulties shown are most astonishing. The simultaneous four A flats and the artificial double harmonics would drive the ordinary student, who attempted to master them, to despair.

Paganini's method of tuning his violin was not so extraordinary as many suppose. Other performers

and composers have made alterations in the pitch of a particular string or strings; Haydn uses an effect of this kind in his overture, "Il Distrato." The alterations in tuning by this wizard of the bow, together with his long, skeleton-like fingers and hands, made possible his extraordinary intervals and stretches. Sometimes he would tune the first three strings half a note higher, the G string being a third lower. At other times he would tune his G to B; or, with a single turn of his peg, alter the pitch of the G string.

Few have equalled him in the management of the bow, although many have copied him. Ordinary staccato was played with a tight bow, loud and firm, like hammer strokes. Another effect of this master's was to dash the bow on the strings, causing it to make a beautiful series of short light staccato notes. His use of the vibrato with the left hand exceeded anything attempted previously.

### **Cause of Harmonics.**

Many instruction books treat the subject of harmonics very superficially. It would be as well, before proceeding to the practical side of harmonics, for the student to turn to the section of this work dealing with the characteristics and properties of the strings. The quality of tone produced by a string is greatly affected by the point at which it is set in motion. It has been explained that a string vibrates simultaneously in sections and at its full length. For example:

The whole vibration gives the fundamental tone or generator.

The vibration of the half of the string gives the octave above.

The vibration of the third of the string gives the twelfth above.

The vibration of the fourth of the string gives two octaves above.

The vibration of the fifth of the string gives two octaves and a third above.

The vibration of the sixth of the string gives two octaves and a fifth above.

The vibration of the seventh of the string gives two octaves and a minor seventh.

These proportions can be continued indefinitely. They also apply to the columns of air in various brass instruments or organ pipes, either of metal or wood, when made to vibrate by the breath of the player, or by the blowing apparatus. On the violin these harmonics are produced in quite a different manner from the stopped notes. Instead of the fingers being pressed firmly on the strings they are used singly and touch very lightly. By dividing the string lightly in this manner, it vibrates from both sides of the finger at once, and one of the harmonic series of the string which is the fundamental generator, is so increased in power as to become clearly audible. A very large number of harmonics can be produced on each string.



### The Number of Harmonics.

It is difficult to say exactly how many harmonics are possible on the violin. Those most commonly used, termed *natural harmonics*, to be found on each string, are here given in the accompanying tables. The scale of G major in *artificial harmonics* in these examples is produced in a different manner from the natural harmonics. Here the lower or black note shows the place on which the first finger must be firmly pressed, while the fourth finger lightly touches the string on the spot indicated by the upper note. The stopped finger shortens the length of string, thus helping to produce the necessary vibrations for the harmonic. A complete chromatic scale can also be obtained on any string by the aid of artificial harmonics, but their satisfactory rendering will depend on the size and flexibility of the player's hand and fingers and also on practice and patience. A fine clear-toned violin is of great assistance in playing harmonics. The bow should be fairly tight and used with fair pressure; the edge of the hair is employed. The G string is a most charming string for harmonics but presents difficulty in producing them clearly. The position of the bow on the strings varies slightly; when a harmonic or octave on the G string is sounded, the bow can be used nearer the middle, between the bridge and fingerboard; for others, higher up the string, it can approach nearer the bridge. The quality of

the G string is most suited for the flute-like sounds produced.

The same law of vibration holds good for every string on the violin. It will therefore be of assistance to the student to remember that all the parts of the strings where the harmonics are to be produced, are parallel with one another. Practice should therefore commence with the G string; shifting into the third position and extending the fourth finger lightly will give the octave of the string, as explained previously. By again dividing the lower half, and putting the third finger down on C, the G, or double octave is obtained; this is the quarter of the string. By halving this quarter and placing the finger nearly on B flat, the triple octave results. The string can also be divided into ninths and tenths, but the student will do well at first to study only the divisions of the string into halves, quarters, fifths and sixths. For general guidance, it may be observed that harmonics which are played on the lower half of a string do not sound as they are written, as those on the upper half do. Harmonics are not generally subject to fixed positions; this is especially true of very high ones which have to be played with the third or fourth finger. If any fixed position must be used, the most suitable is the third.

### **Harmonic Tables.**

It will be seen from the tables given that the same natural harmonics appear two or three times on one

string. With the aid of artificial ones still more can be obtained. It is as well in practising to use long sustained notes; the finger tip must fall in the exact place and remain motionless while on the string, as any quivering is fatal. The third position can be taken and each finger used on each string, viz., first on C, second on D, third on E, fourth extended to the octave, the same process being adopted on the D, A and E strings. After these exercises have been well studied, artificial harmonics should receive attention, the finger for the stopped note being firmly placed and the harmonic finger lightly; this is difficult at first, but will be managed with practice. When mastered, scales can be taken on each string; then crossing the strings, although it is as well always to remain on one string and in one position as much as possible.

### TABLES OF NATURAL HARMONICS.

#### 1. G STRING

NOTE PRODUCED:

NOTE PLAYED:

## 2. D STRING

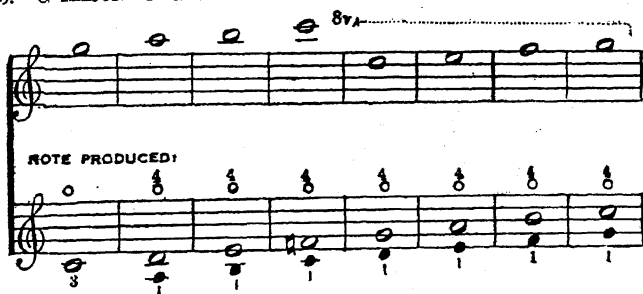
The second system of the musical score for 'The Merry-Go-Round' consists of two staves. The upper staff continues the melody from the first system, starting with a treble clef and a key signature of one sharp (F#). The lower staff provides a harmonic accompaniment, featuring a treble clef and a key signature of one sharp. The melody in the upper staff is composed of eighth and quarter notes, while the accompaniment in the lower staff uses a mix of eighth, quarter, and half notes. The system concludes with a double bar line.

### 3. A STRING

#### 4. E STRING

## SCALE OF G MAJOR IN STOPPED OR ARTIFICIAL HARMONICS.

## 5. G MAJOR ON G STRING.

**Double Stopped Harmonics.**

Harmonics can be played in double stopping, but such effects are introduced in only a very limited quantity of music of the utmost difficulty. Paganini's works abound in such difficulties, but he was an exceptional player and what was child's play to him is almost impossible to the average violinist.

**Pizzicato.**

*Pizzicato*, or the abbreviation *pizz.*, indicates that the strings are to be plucked with the finger, instead of being played with the bow.

Paganini was the first to introduce this style into solos. Although some players despise it, many fine effects may be obtained from pizzicato used with taste and judgment. Any finger may be used, but the first finger of the right hand is the most convenient, as it leaves the other fingers free to retain the hold of the bow. The thumb is placed against the fingerboard for support and rests with the

cushion or fleshy part on the right side of the fingerboard, but not too near the end. The first finger pulls the string sideways, but on no account upwards, as this would produce a cracked and snapping noise. See that the nail of the finger is short and that the string is plucked with the fleshy part of the finger, not with the nail. The bow is held by the second, third and fourth fingers and palm of the right hand, thus giving freedom to the first finger. The three fingers hold the bow while the palm envelops the nut of the bow. Music is sometimes written in which, owing to speed, the pizzicato has to be performed with the disengaged fingers of the left hand. This is difficult and requires great strength of finger. The fourth finger is generally used for left hand pizzicato. When the bow is to be used again the music is marked *arco* or *coll' arco* (with the bow). (Plate XL, Figs. 1 and 2.)

### Octaves.

Of all branches of left hand violin technique, octaves are the most difficult to play consecutively. The trouble is to play them perfectly in tune. Each note requires a slight change in the position of the hand, and the relative distance between the first and fourth fingers is reduced with each note in ascending the scale, and *vice versa*. Keep these fingers down firmly and move them together, without lifting them. The second and third should also be kept down in order to help the fourth finger, for the

whole hand must move for each octave, not one finger after another. More difficulty is experienced when descending a scale in a high position, as the position of the thumb under the neck block is changed. Take care that both notes are sounded exactly together. A free action of the wrist is necessary in moving the bow from one string to another. Octave scales should be practised to the extent of one octave only, at first.

### Grace Notes, etc.

Grace notes may be described as ornaments to the music. They are of six kinds: the *acciaccatura*, *appoggiatura*, *mordent*, *direct turn*, *indirect turn* and *trill*. The last of these has already been explained on previous pages. The word *acciaccatura* comes from the Italian *acciaccare*, meaning "to crush." The "crushed note" is written in small type before the main note, which is termed "the principal," has a small stroke through the tail, and is played very quickly. The accent falls upon the principal. It is joined to that note by a slur and both are played with one stroke of the bow.

The *appoggiatura* is also a small note placed before a principal, and is written like the *acciaccatura* except that it has no line through the stem. It takes half the value of the note which it precedes. Its name is derived from the Italian *appoggiare*, to rest, or lean upon. It is slurred on to the principal, from which it takes the accent.

The *mordent* or short trill is a sign similar to the letter w over a note. Instead of one note only, first the principal, then the note above and then the principal again are played. Sometimes the *mordent* is written out, with two small notes. It must be played quickly.

There are many *turns*, and to explain them all is unnecessary. A *trill* generally finishes with a *turn*. Many are written out in full; others are marked by the sign  $\sim$  and vary in speed according to the *tempo* of the composition. When the sign is placed directly above the principal note it is termed the *direct turn*, and is played by taking the note above the principal in the diatonic scale, the principal itself, the note below it, and finally the principal again. If the sign is placed after a note, it is *indirect* and the principal note is played first. The *inverted turn* begins on the note below the principal. If it is desired to sharpen or flatten either of the two unwritten notes of a turn, a sharp or flat is placed above or below the sign; that above refers to the upper note of the turn and the one below to the lower note. Should it be necessary to change these to their correct pitch, a natural is employed in the same manner.

The following table has been drawn up as a guide to a systematic course of practice, and should prove of special value to self-taught students and those who find it difficult, owing to circumstances, to obtain regular instruction :



# TABLES OF EXERCISES AND ORDER OF PRACTICE.

SUBJECT.	SCALES.	ELEMENTARY.	INTERMEDIATE.	ADVANCED.
Whole sustained bows.	One and two octaves, semibreves, minims and crotchets. Whole bows ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 25 to 32. Carse's Studies, Bk. 1, Nos. 3 and 11.	W. R. Cave's Studies, Nos. 1 to 5.	Spohr's Violin School, Nos. 10 and 12. Kreutzer's Studies, No. 1.
Half bows.	One and two octaves, minims and crotchets, half bows ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, No. 34. Carse's Studies, Bk. 1, Nos. 2 and 11.	Cave's Studies, Nos. 7, 8, 10, 12, 13 and 22.	Kayser's Studies, Nos. 1 and 7. Kreutzer's No. 2.
Whole and half bows combined.	One and two octaves. Chromatic ditto ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 33, 35 and 36.	Cave's Studies, No. 11.	Sevčik's Violin Technic, Pt. 1, No. 29.
Middle point and heel of the bow. (Wrist stroke.)	One and two octaves, quavers and semiquavers, middle point and heel ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Cave's Studies, Nos. 10, 12, 13, 14, 15, 18. Carse's Studies, Bk. 1, Nos. 1, 5, 10, 16, 18 and 19.	Tours's Tutor, No. 54. Sevčik's Violin Technic, Pt. 1, No. 29. Carse's Studies, Bk. 2, Nos. 14, 15.	Kayser's Studies, Nos. 1, 5, 7, 9, 11 and 19. Kreutzer No. 2. Spohr's School, No. 25.

SUBJECT.	SCALES.	ELEMENTARY.	INTERMEDIATE.	ADVANCED.
Upper half, point and middle of the bow, combined strokes.	One and two octaves, quaver, up-per half, two semi-quavers at point, then reverse the stroke ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 33, 35 and 36. Carse's Studies, Bk. 1, No. 13.	Cave's Studies, Nos. 11 and 16. Sevčik's No. 29. Carse's Studies, Bk. 2, No. 9.	Kayser's Studies, No. 3.
Legato or slurred bowing.	One and two octaves slurred in groups of two notes in the middle of the bow; in fours, upper half; in eights whole bows, in sixteens whole bows, in 32 whole bows ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 37, 38, 39, 59, 68. Carse's Studies, Bk. 1, Nos. 1, 3, 5, 11, 15, 17 and 19.	Cave's Studies, Nos. 19, 26, 28, 30, 37 and 39. Sevčik's No. 29. Carse's Studies, Bk. 1, Nos. 16, 18, Bk. 2, Nos. 1, 3.	Kayser's Studies, Nos. 4, 8, 12. Spohr's Violin School, Nos. 24, 26, 29 and 30.
Slurred and detached bowings combined.	One and two octaves. Bow two, slur two, etc. ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ). Chromatic ditto.	Tours's Tutor, Nos. 40, 41, 49, 51 and 61. Carse's Studies, Bk. 1, Nos. 1, 5 and 19.	Cave's Studies, Nos. 12 (four bowings), 16, 23, 32, 33, 38. Sevčik's No. 29. Carse's Studies, Bk. 2, Nos. 1, 3, 9, 14.	Spohr's School, Nos. 22, 19 and 17. Kayser's Studies, Nos. 1, bowings 1, 2, 3, 4 and 5.

Bowing of dotted notes detached and slurred.	One and two octaves. Slurred quavers and semi-quavers combined and detached ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 58, 58a, 58b. Carse's Studies, Bk. 1, No. 17.	Spohr's School, Nos. 21 and 28. Sevcik's No. 29. Carse's Studies, Bk. 2, No. 10.	Kayser's Studies, Nos. 23 and 32.
Staccato at the upper half of the bow detached and slurred.	One and two octaves; eight quavers staccato to each note detached and slurred ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, No. 1, p. 29, Nos. 50, 62 and 72.	Cave's Studies, Nos. 15, 25, 34, 24, 27 and 35. Sevcik's No. 29.	Kayser's Studies, Nos. 1, 5, 7, 9, 11, 13 and 33. Kreutzer's Nos. 4 and 5. Fiorillo's No. 3.
Martelé at the upper half of the bow.	One and two octaves. Four strokes to each note ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, No. 69. Carse's Studies, Bk. 1, No. 11.	Kayser's Studies, Nos. 7 and 11. Sevcik's No. 29. Carse's Studies, Bk. 2, No. 8.	Kreutzer's Nos. 5, 6 and 7.
Springing bowings	One and two octaves ( <i>p.</i> , <i>mf.</i> and <i>f.</i> ).	Tours's Tutor, Nos. 71 and 73.	Kayser's Studies, Nos. 5, 9, 19 and 30. Sevcik's No. 29.	Kreutzer's No. 5.
Arpeggio and springing arpeggio.	Detached arpeggio on all scales up to two octaves.	Tours's Tutor, Nos. 79 and 80. Carse's Studies, Bk. 1, No. 20.	Kayser's Studies, No. 10. Sevcik's No. 29.	Fiorillo's Studies, No. 36. Spohr's School, No. 60.

SUBJECT.	SCALES.	ELEMENTARY.	INTERMEDIATE.	ADVANCED.
Double-stopping. First position.	One octave in thirds.	Spohr's School, Nos. 2 and 3. Tours's Tutor, No. 75. Carse's Studies, Bk. 1, No. 17.	Tours's Tutor, Nos. 76, 77.	Cave's Studies, No. 40. Sevčik's Violin Technic, Op. 1, Pt. 1, Nos. 17, 23, 24 and 26.
Second position.	Two octaves entirely in the second position and shifting.	Seven Positions of the Violin, Basil Althaus, Nos. 4, 5, 6, 7, 8, 9 and 10.	Tours's Tutor, Nos. 82 and 83. Carse's Studies, Bk. 2, Nos. 19, 20, 21, 22, 23 and 24.	Spohr's School, Nos. 37, 38 and 39. Sevčik's, Part 2, Nos. 1, 5, 4 and 2 (No. 2 Double-stops).
Third position, with backward and forward extensions.	Two octaves in the third complete scales of one octave on each string with extensions.	Seven Positions, Nos. 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 17 and 18 (Nos. 14, 17 and 18 on the slide.)	Tours's Tutor, Nos. 84, 85, 86. Kayser's Nos. 16 and 18.	Kreutzer's No. 11. Spohr's School, Nos. 40 and 41. Sevčik's Pt. 2, Nos. 12, 13 and 14 (Double-stopping). Kayser's No. 20.
Fourth position.	Two octaves in the fourth entirely and shifting.	Seven Positions, Nos. 4, 5, 6, 7, 8, 9, 10 and 11.	Tours's Tutor, Spohr's School, Nos. 88 and 89. No. 43.	Sevčik's Pt. 2, Nos. 21, 24 and 27.

<b>Fifth position.</b>	Two and three octaves ditto.	Seven Positions, Nos. 4, 5 and 6.	Tours's Tutor, Nos. 90 and 91.	Spohr's School, No. 44. Sevčík's Pt. 2, Nos. 30, 32 (31 double-stopping).
<b>Sixth position.</b>	Two and three octaves ditto.	Seven Positions, Nos. 4, 5, 6 and 7.	Spohr's School, No. 45.	Sevčík's Pt. 2, Nos. 35 and 37.
<b>Seventh position.</b>	Two, three and four octaves ditto.	Seven Positions, Nos. 4 and 5.		Sevčík's Pt. 2, Nos. 39 and 40 (double-stopping).
<b>Exercises using all positions.</b>	Two, three and four octaves, using all positions in thirds and sixths.	Seven Positions, No. 7, page 22.	Seven Positions, No. 6, page 26. Tours's Tutor, No. 92. Kayser's Studies, Nos. 25, 29, 30, 35.	Spohr's School, Nos. 46 and 47. Kreutzer's Nos. 24 and 28. Piorillo's Nos. 9, 11 and 34.
<b>Harmonics.</b>	One octave on each string.	Tours's Tutor, pages 98 and 99.		Sevčík's Pt. 4, Nos. 21, 22 and 23. School of Harmonics, by Blumenthal.

SUBJECT.	SCALES.	ELEMENTARY.	INTERMEDIATE.	ADVANCED.
Open shake or trill and double trill.	One, two and three octaves. For dbl. trills in thirds and sixths.	Tours's Tutor, page 57, Exs. Nos. 65 and 66. Cave's Studies, No. 28.	Kayser's Nos. 14 and 22.	Fiorillo's Nos. 2 and 6. Kreutzer's Nos. 14, 15, 16, 17, 18, 19, 20, 21 and 38.
Mordents, appoggiaturas and acciaccaturas.	One, two and three octaves with mordents.	Tours's Tutor, pages 53, 54, 59 and 60. Cave's Studies, No. 34.	Kayser's Nos. 15 and 30 (Mordent). Carse's Studies, Bk. 2, No. 11.	Kreutzer's Nos. 17, 19 and 21.
Turns.	One and two octaves; turns on each note.	Tours's Tutor, pages 55 and 56.	Spohr's No. 64.	Fiorillo's No. 7. Kreutzer's No. 26.
Pizzicato.	One, two, three and four octaves, bowed and pizzicato alternatively.	Tours's Tutor, No. 81.	Kayser's No. 20.	Sevčík's Pt. 4, Nos. 19 and 20.
Tremolo.	One, two and three octaves in thirds, sixths and octaves.	Tours's Tutor, Nos. 74 and 75.		
Chords.	Detached arpeggios in all keys.	Tours's Tutor, No. 78. Cave's Studies, No. 38.	Sevčík's Pt. 1, Nos. 27 and 28. Fiorillo's No. 36.	Sevčík's Pt. 4, Nos. 17 and 18.

<b>Double stopping using all positions.</b>	One and two octaves in thirds and sixths.	Spohr's School, Nos. 55 and 56.	Fiorillo's Nos. 4 and 35.	Fiorillo's Nos. 17 and 18. Spohr's Nos. 57 and 58. Kreutzer's Nos. 30, 31, 32, 33, 34, 35, 37, 39 and 40.
<b>Octaves and tenths.</b>	One octave played in octaves.	Tours's Tutor, Nos. 95 and 96.	Kayser's No. 36.	Spohr's Nos. 48 and 49 (tenths). Kreutzer's No. 23.
<b>Triplets.</b>	One, two and three octaves in triplets.	Tours's Tutor, Nos. 57, 57a, 57b, and 57c. Carse's Studies, Bk. 1, No. 12.	Cave's Studies, Nos. 17, 21, 29, 31 and 36. Kayser's Nos. 6, 11 and 13.	Kayser's Nos. 17, 18, 27 and 34. Kreutzer's Nos. 5, 6, 11 and 20. Fiorillo's Nos. 9, 10, 15, 23, 26.

## CHAPTER XII.

# SOLO PLAYING, STYLE, SOLOS, DUETS, QUARTETS AND ORCHESTRAL PLAYING.

TO be a great soloist, or even a first-class one, demands many qualities: natural aptitude, technique, command of beautiful tone, a musical soul—and nerves. If one is gifted with all these, success is sure. When a solo is studied, the difficult passages should receive attention first, then the fingering, phrasing and expression. Difficulties cannot be overcome without slow, thoughtful, careful and methodical practice. Unless you are really capable, do not play in public. Follow the composer's ideas as closely as possible, but put your own musical soul into the piece. Very few possess all the requisites of perfect execution. One player excels as a mechanist; another displays more taste; while a third is carried away by his feelings and, through not submitting his impulses to the correction of his judgment, fails both in taste and execution.



Soloists who are careless in phrasing, who clip their notes, force the tone, neglect the accentuation and expression, make free with the time, adopt a false and affected manner, introduce notes and flourishes that are not written, are pests. They do not love their art. It is a trivial thing to them and only a means of gratifying their vanity.

Correct execution, taste and expression are essential to the performance of a solo. By "execution" is meant the mere production of the notes, i.e., the quality of tone, perfection of intonation, and the more or less rapid utterance of the notes. To attain a perfect execution, the first absolute necessity is *tone*. But even with an aptitude for solo playing, years may have to be spent in practice before a fine tone is obtained. Command of tone implies the ability to obtain the greatest power of which the instrument is capable or the merest whisper (without loss of quality) with all the intermediate shades. To this a perfect performer must add the ability to produce all the timbres that the instrument will yield. The vast variety in the quality of tone which can be produced from the same instrument is most remarkable, though it must be remembered that some instruments have not this property to the same extent as others. The same soloist produces different qualities of tone, but no two performers ever produce exactly the same tone. Nothing but time given to study will give good (i.e., liquid, clear and vibratory) tone.

Perfect intonation is of the utmost value. Some cannot play out of tune, but this gift is very rare. Many players, not ungifted with musical capacity, fail in this respect when led away by their feelings, though when not excited, they are probably able to detect the slightest variation from the true note. It is, therefore, as remarked elsewhere, important that the student should form his ear, before he attempts to play in public. One of the great secrets of good playing is the art of acquiring "flow" and equality in both the sound and duration of each note, so that passages run evenly and liquidly, without break or interruption. Equality rather than speed, is the object to aim at, though, of course, execution demands a certain amount of speed. The distinct articulation of the notes is one thing, and the time of their utterance, another. A bad timist never executes neatly. Although execution has been mentioned first, it is not the most important of the three essentials. It should be subservient to taste and expression. Expression is the life of music, and all performers must devote their powers to its acquirement. Unfortunately many who study "expression," do not really enter into the spirit of a piece; their *fortissimos* are only *fortes* and their *pianos* or *pianissimos* are not nearly soft enough. Great difference should be made between the different grades of loudness. One is often thrilled by hearing a sudden change in tone and style. The delightful effect obtainable in a properly performed *crescendo* or a perfect *dim-*

*inuendo* is most moving. Again, the "shake," played slowly at first then gradually increasing in tone and speed, and finally dying away, has a beautiful effect in solos. Time-marks are of the greatest importance; the effect of a composition is often lost through its being played too quickly or too slowly.

We have already remarked upon the importance of good phrasing. The art of correct reading and delivery of passages, commonly called "phrasing," is a vital factor in the intelligent rendering of a solo. Bad phrasing is equivalent to bad punctuation in writing. Without true enunciation and proper emphasis in delivering sound, vocal or instrumental, the subject is wholly devoid of rhythm and character. Each phrase should be separated from the others by a distinct break. Mechanical skill is merely a means of attaining this end. Consequently, before phrasing and right expression can be acquired, the mechanical difficulties must be overcome.

Delicacy rather than strength should be sought. Fullness of tone should be reserved for those parts of the piece which require a deep colouring, and the relief will then be so much the more striking. Again, too much emotion will tend to disturb the rhythm and *tempo*. A certain degree of individuality is essential. There are thousands who have splendid technique, but no individuality; these are mechanical players. Cultivation of style is often spoken about. It appears to be something akin to

genius, in that it is a natural gift to some. And yet it can be learned by imitation and by the cultivation and development of what we hear. Though we cannot, with perfect accuracy, *define* good style in music, we can state in round terms those particulars of which *bad* style consists, and by avoiding them we shall necessarily acquire that which is good. Style is gained, not so much by tuition, as by hearing and seeing the methods of good players. The gradual development of style exhibited by the most celebrated players of the last two hundred and fifty years, corresponds exactly with the steps the young artist must take to reach perfection.

Taste is that faculty of mind which perceives and appreciates what is excellent in literature and the fine arts. A skilful performer possessing taste, but not expression, compels our admiration, but does not move our feelings. Taste is a matter of judgment, expression one of feeling and imagination. First impressions in music are not always easily forgotten, and very often prejudice the hearer against a fine performance, different in style, *tempo* and expression from that which he has first heard. Music in quick *tempo* produces an effect so different when played by violinists of varying warmth of temperament that one seems to have played faster than the other. As Fétis observes, this difference arises entirely from the absence or presence of that attribute which distinguishes the mechanical and poetical organisation of a player, viz., rhythmical accent.

A clear head and steady nerves are a priceless boon. However perfect the technique and memory, if the nerve is lacking, everything else will go; and, unfortunately, one has very little sympathy from the public if one breaks down through nerve failure. Health must always receive careful consideration before playing in public.

Solos should be memorised if possible. In practising, several fingerings should be tried. If the question of expense need not be considered, it is a good plan to obtain copies of different editions of a piece. Try the various fingerings over and base your own on them. A new solo very often looks difficult at first sight, but after careful and repeated playing, taking the difficult passages separately, the difficulties gradually disappear. When playing in public get the A of the piano and thoroughly tune before going on the platform. Then tune again on the platform, as, owing to the difference of the temperature in a large hall or room, the violin is liable to go out of tune when heated. If the instrument goes seriously out of tune during a performance, it should be tuned quietly during any rest bars where the piano has a symphony. Nervousness makes many violinists dissatisfied with their playing and it may be of some comfort to these to know that a piece sounds better to the listener than to the soloist. The latter knowing all his weak places, defects appear greatly magnified to him. He hears every little tremor and grating of the bow, inaudible to

the audience. Always rehearse with your pianist some weeks before a performance; you will get used to each other and greater freedom of execution is made possible.

Many players choose the wrong type of solo for concert use. Suit this to your audience, but never descend to the cheap and common. The following lists of solos are arranged in grades of difficulty, the first for very young players. The well known have been omitted, as they are household words to all violinists and need no mention in these pages. Those given are tuneful, effective and should be suitable to all tastes.

#### GRADE I. (FOR YOUNG PLAYERS.)

- "Andante Grazioso," Noel Johnson (C. Woolhouse).
- "Danse Rustique," F. Borowski (Laudy).
- "Fairy Fancies," Enrique de Tolima (Evans).
- "Gavotte," Op. 73, Hans Sitt (J. Williams).
- "Romance," Merkel (Ashdown).
- "Serenade d'Arlequin," F. Huet (Breitkopf).
- "Six Miniatures," H. Saint-George (Evans).
- "Twelve Summer Sketches," Wilson Manhire (Freeman).

#### GRADE II.

- Andante and "Air de Ballet," J. Danbe (Schott).
- "Air de Ballet" and "Reverie," Basil Althaus (J. Williams).
- "Entr'acte Gavotte," W. R. Cave (Gould).
- "Extracts from the Great Masters," Vols. A and B, Hermann (Augener).
- "Gavotte in F major," Padre Martini (Weekes).
- "Joyeuse," H. F. Gosling (Freeman).
- "L'Ancien Régime," Saint-George (Augener).

- "Legende Amoureuse," J. Henri (Schott).
- "Romance and Tyrolienne," Op. 2, J. Danbe (Schott).
- "Six Airs Varied," Dancla (Schott).
- "Saltarello," F. Mullen (Williams).
- "Tarantella," H. J. Henry (Laudy).
- "Three Nocturnes," Burgmüller (Augener).

## GRADE III.

- "Air de Danse," H. F. Gosling (Freeman).
- "Ballet Music" and "Entr'acte de Rosamonde," Schubert (Schott).
- "Czardas, No. 6," Michiels (Schott).
- "Brindisi Valse," Alard (Novello).
- "Eastern Serenade," A. Fox (Gould).
- "Golden Fiddle Album (Keith Prowse).
- "Humoreske," Dvorák (Lengnick).
- "Hungarian Dances," Brahms (Bosworth).
- "Melodie," H. F. Gosling (Piena).
- "Oberon Minuet," H. F. Gosling (Piena).
- "Pizzicato," Thomé (Schott).
- "Romanza" and "Madrigale," A. Simonetti (Ricordi).
- "Rozsabokor Czardas," Drdla (Bosworth).
- "Serenade," Leoncavallo (Carey).
- "Tarantella" and "Juanita-Bolero," W. R. Cave (Laudy).
- "Tarantella," H. Tolhurst (Ashdown).

## GRADE IV.

- "Airs de Ballet 'La Reine de Saba,'" Gounod (Metzler).
- "Airs Varied," Rode (Augener).
- "Album of Six Pieces," C. Bohm (Lengnick).
- "Bouree," Op. 24, W. H. Squire (Augener).
- "Chanson Polonaise," Wieniawski (Augener).
- "Concertino in A minor," Accolay (Schott).
- "Furioso," H. F. Gosling (Piena).
- "Il Trovatore" and "Faust" Fantasias, Singelee (Schott).
- "Seven Airs Varied," De Beriot (Schott).

"Samson and Dalila," Saint-Saëns (Durand).

"Serenade Angelique," L. Hann (Laudy).

"Twelve Sonatas," Corelli (Augener).

### VIRTUOSI STANDARD.

The Concertos of Bach, Beethoven, Mozart, Mendelssohn, Max Bruch, Rode, Viotti, Brahms and Sir E. Elgar, etc.

Those mentioned in the latter grade are difficult, graduating approximately from Rode, Viotti, Mozart and Bach in difficulty. A good violinist should endeavour to master some of these, as acquaintance with some of the standard concertos is expected of all soloists worthy of the name.

### Duet Playing.

When the student has made sufficient advance in his studies, he should make a speciality of duet practice as it is of first-class value in teaching time, confidence and sight-reading. The harmony from two violins, though weak, is very charming and considerable benefit may be derived from practice with a more advanced player. The playing of duets is also very interesting and enjoyable. Those who have practised plenty of duet playing are well prepared to take their places in the orchestra in due course. They are careful readers, good time-keepers and play well in tune—very necessary factors in the making of a good orchestral player. In duet playing the same qualifications are required as in solo playing, but the student must learn to subordinate



himself to the other player when he has the accompanying part to play. This must be so tastefully performed as to help to show up the beauties of the solo part. Double stopping is generally freely used in duets, and if the duets are well arranged the melody is evenly divided between the two instruments. It is a good plan to exchange parts occasionally, more especially where the chords are intricate or the parts difficult. Many beautiful duets are published in both the light and classical styles. A graduated series, from the most simple to the most difficult, by various composers, in several books, is published by Augener under the title of "Palaestriana." They are well fingered and carefully chosen from all sources. Other standard duets are: Pleyel's five books, Mazas's five books, Gebaur's two books, Spohr's four books, and Viotti's three books. There are other well-known ones by Rode, Dancla, Romberg, Mayseder, De Beriot, Campagnoli, and other composers. A fine series in three volumes, for two violins and piano, is "Klassischer Stücke" from the Great Masters (Peters Edition). Two books of easy duets by Emil Kross (Bosworth), comprising extracts from popular composers, are very suitable for those who wish for variety.

### Quartet Playing.

From duet playing the next step is to quartets. Here the student enters the realm of all that is greatest in music. The string quartet of two vio-

lins, viola and 'cello is an ideal combination. The melody passes from one instrument to the other and no one is superior to the rest. In quartet playing, as in duets, one must learn to become an accompanist when other instruments have a solo part, assisting in every way to add to the beauty of the composition as a whole. There is a large and rich repertoire to choose from. First and foremost, should come Haydn's, Mozart's and Beethoven's quartets.

### Orchestral Playing.

Finally we come to orchestral playing. It is a good thing for the student to join an amateur orchestra, not one which plays only light, trashy music, but one which rehearses the symphonies, overtures, etc., of the great masters. This will give him a true idea of what good music really is, and add to the delight of study and to his experience. If the conductor be a thoroughly cultured and experienced musician and willing to advise and help his players, the advantage cannot be over-estimated. It should always be remembered that a student joins an orchestra for experience and *sight-reading*, not to attend week by week to grind away at the same old pieces for a prospective concert performance; although of course a certain part of the rehearsal-time must be devoted to concert pieces. When playing in an orchestra you must forget you are a solo player. The

fundamental principle, underlying the idea of the orchestra, is that of a connected whole made up of separate units. The players are the units and, between them, form the orchestra, which is played on as a whole by the conductor. Self must therefore be lost in All. Each has a part to play, but it must be played as part of a harmonious *whole*. The player must sink himself and accept the conductor's reading of the music. The player's musical soul is, so to speak, merged in that of the orchestra. The requisites of good orchestral playing are balance, body, quality, precision and careful observance of the beat; to these may be added a cool head. Do not attempt to play every note at first, if the music is difficult; this will cause you to lose beats and will result in a "muddy" and scrambled rendering. If you lose your place, wait until you can pick yourself up again; do not go tearing along under the delusion that you are lines behind; play softly and wait to catch the cue from the conductor or your fellow-player at the same time. Do not stop playing and tune up in *piano* passages. And, above all, don't hold semi-private conversations with neighbouring players. Slide as little as possible, but, when it is really necessary, do it swiftly and not in such a whining manner as to make yourself prominent above the others. Never play the music an octave higher, unless it is specially marked; the composer knows what he requires, without your improvements. This vulgar habit is very prevalent in

amateur orchestras. It should be of comfort to the student to know that it is much easier to play in an orchestra than to play a solo. Amateurs are generally nervous, but with others round them to give confidence, this nervousness is only slightly felt and soon passes off. Excitement and lack of attention will cause serious and sometimes amusing mistakes. A tale is told of an amateur orchestra, performing at a local concert. After playing two or three selections, they were required to perform again. One excited player, who had no programme, bent forward to the player at the desk in front and asked "What is the name of the next piece, please?" He was told, "Night Amid the Pyramids." "Great Scott!" he exclaimed, "I played that last time."


The list of terms which closes this volume is not, of course, absolutely complete, but practically all those of use to the violin student have been included. In conclusion, we can only say that violin playing and its advanced technique of to-day will not remain stationary. There are vast fields open for exploration, both as regards playing and composition. New effects will be looked for, and out of the simple yet wonderful sound-box, with its four strings, will be drawn secrets which are as yet voiceless and awaiting some future genius to bring them forth to the world. The powers of this great instrument are endless, and each generation adds something further to the beauties of its literature. We close with the

words inscribed in a violin belonging to Palestrina which, translated from the Latin, read :

“I, whom the axe from sylvan life did trenchantly divorce,

Was dumb while living—but, now dead, am full of sweet discourse.”

# LIST OF VIOLIN AND MUSICAL TERMS.

- A.—In, by, to, with or at.
- A Archet.—To be played with a bow.
- Abbreviation.—A musical passage written in a shorter way to save time and space. A mark called the baton is printed under or through the stem of a note. It divides it into quavers; if the baton be double into semiquavers, and if treble into demisemiquavers, etc. It also stands as a substitute for any note or passage that precedes it.
- Absetzen (Ger.).—Staccato.
- Abstrich (Ger.).—Down bow.
- A capriccio (It.).—At will.
- Accelerando (It.).—Increasing the speed.
- Accent.—An emphasis on certain notes, to mark their particular position in the bar and their relative importance with regard to the rhythm.
- Acciaccatúra (It.).—See page 235.
- Accidentals. — Occasional sharps, flats or naturals placed before notes in the course of a piece.
- Accorder (Fr.).—To tune.
- Acoustics.—The science of sounds.
- Ad.—To, or at.
- Adagio (It.).—A slow movement.
- assai } Very slow.  
— molto }
- Ad libitum (Lat.).—At will.
- A dué (It.).—For two.
- A demi-voix (Fr.).—Subdued tone.
- A due corde (It.).—Upon two strings.
- Agitato (It.).—Agitated.
- A la pointe d'archet (Fr.).—At the point of the bow.
- Alla (It.).—In the style of.
- Alla breve (It.).—Two beats in a bar, one to each minim. The signature is marked .
- Alle (Ger.).—All.
- Allegretto (It.).—Light and cheerful.

- Allegro** (It.).—Quick and lively.
- **ma non troppo**.—Gay, but not too quick.
- **con brio** (It.).—Quick and spirited.
- **con fuoco** (It.).—Quick and fiery.
- **moderato** (It.).—Moderately quick.
- **vivace** (It.).—Quick and lively.
- Allein** (Ger.).—Alone, only.
- Al segno** (It.).—Go back to the sign  $\text{♯}$ .
- All'ottava** (It.).—In the octave above.
- Âme** (Fr.).—The sound-post of a violin, etc.
- Amoroso** (It.).—Lovingly.
- À monocorde** (Fr.).—On one string.
- Andante** (It.).—Slow.
- **cantabile**.—Slow and in a singing manner.
- **grazioso**.—Slow and graceful.
- **maestoso**.—Slow and majestic.
- **ma non troppo**.—Slow, but not too slow.
- Andantino** (It.).—Not quite so slow as *Andante*.
- Anhaltend** (Ger.).—Sustained.
- A piacere** (It.).—At pleasure.
- A poco a poco** (It.).—Little by little.
- Appassionato** (It.).—With passion;
- Appoggiatura** (It.).—See page 235.
- Archet** (Fr.).—The bow.
- Arco** (It.).—The bow.
- Arpeggio** (It.).—In the style of playing the harp. See page 201.
- Assai**.—Very, much.
- A tempo** (It.).—In time.
- Attacca** (It.).; **Attacca subito**.—Commence the following without a break.
- Aufstrich** (Ger.).—The up-bow.
- A una corda** (It.).—Upon one string.
- A volonte** (It.).—At will.
- Balken** (Ger.).—The bass-bar of the violin. See page 22.
- Bebung** (Ger.).—See **Tremolo**.
- Beliy**.—The sound-board of an instrument. See page 10.
- Ben** (It.).—Well; good.
- Besaiten** (Ger.).—To string a violin.
- Bis** (Lat.).—Play twice.
- Boden** (Ger.).—The back of the violin.
- Bogen** (Ger.).—The bow.
- Breit** (Ger.).—Broad.
- Brillante** (It.).—In a brilliant style.
- Brio, con** (It.).—With briskness.
- Cadence**.—A close or finish of a phrase in the harmony.
- Cadenza** (It.).—An ornamental passage or passages, introduced near the end of a solo, usually written in small notes.
- Calando** (It.).—Softer and slower.
- Calmato** (It.).—Calm.

- Capotasto (It.).—The nut of the finger-board of a violin.
- Chanterelle (Fr.).—Treble string or E string of the violin.
- Chevalet (Fr.).—The bridge of a violin.
- Cheville (Fr.).—The peg of a violin.
- Chorda (Lat.).—A string.
- Chromatic.—Proceeding by semitones.
- Coda (It.).—A tail or finish.
- Col (It.).—With.
- Colla parte (It.).—Follow the chief part.
- Cella voce (It.).—Follow the voice.
- Coll' ottava (It.).—To be played in octaves.
- Colophon (Fr.).
- Colophonium (Ger.).
- Colophony (Eng.).
- Colofonia (It.).
- Comodo (It.). — Without hurry.
- Concertante (It.).—A piece in which each part is alternately principal and subordinate.
- Concertino (It.).—A short concerto.
- Concerto (It.).—A composition for a solo instrument, with orchestral accompaniment.
- Con (It.).—With.
- moto (It.).—With movement.
- Corde à jour (Fr.).—An open string for the violin.
- Coulé (Fr.).—A slur.
- Cremona (It.).—A small town in Italy celebrated as having been the residence of the renowned violin-makers whose instruments are spoken of as Cremonas.
- Crescendo (It.).—Increasing in loudness.
- Crowder.—An old term for a performer on the *crwth*; the name was afterwards applied to a common fiddler.
- Da.—From.
- capo (It.).—From the beginning.
- capo al fine.—Repeat from the beginning to the sign FINE.
- capo al segno (It.).—Repeat from the sign.
- D'accord (Fr.).—In tune.
- Dämpfer (Ger.).—A mute for a violin.
- Decrescendo (It.).—Decreasing in loudness.
- Deciso (It.).—With decision.
- Delicatezza (It.).—Delicacy.
- Démancer (Fr.).—To change the position of the hand when shifting on the violin.
- Demi (Fr.).—Half.
- Detaché (Fr.).—Detached.
- Di (It.).—Of.
- Diatonic.—Proceeding by tones and semitones.
- Direct.—An old sign resembling a W at the end of a line denoting that the bar is not finished, but continued on the next line.
- Diminuendo (It.).—Diminishing in loudness.
- Divisi (It.).—Divide the parts.
- Dolce or Dol. (It.).—Sweet.



- Doloroso (It.).—With sadness.
- Doppelgriffe (Ger.).—Double stopping.
- Due volte (It.).—Twice.
- Eclisses (Fr.).—The ribs of a violin.
- E, ed (It.).—And.
- Enharmonic.—Two notes, like C sharp and D flat, identical on a keyed instrument, but distinguishable on a stringed one.
- Ensemble (Fr.).—Together, the whole.
- Erste (Ger.).—First.
- Espressivo (It.).—With expression.
- Étude (Fr.).—A study or exercise.
- Facilité (Fr.).—An easy arrangement.
- Feathering.—A term applied to the delicate and lightly detached manner of bowing certain rapid passages.
- Fermáta (It.). }  
Fermate (Fr.). } A pause.
- Fermato (It.).—Firmly.
- Fidicinal (Lat.).—Of the fiddle species.
- Fiedel (Ger.).—Fiddle, violin.
- Fiel.—An old name for the violin.
- Fieramente (It.).—Boldly.
- Finale (It.).—The last movement of a sonata or symphony.
- Fine (It.).—The end.
- Forte or f.—Loud.
- Forza, con (It.).—With force.
- Forzando, sforzando, sf., or fz.—A sudden force applied to one note.
- Frosch (Ger.).—The nut of the bow.
- Fuoco, con (It.).—With fire.
- Für (Ger.).—For.
- Furioso (It.).—With fury.
- Ganzer Bogen (Ger.).—With the full length of the bow.
- Gebunden (Ger.).—Bound, connected, slurred or legato.
- Geige (Ger.).—The violin.
- Geigen (Ger.).—To play the violin.
- - Bogen (Ger.).—Violin bow.
- - Futter (Ger.).—Violin case.
- - Hals (Ger.).—Violin neck.
- - Holz (Ger.).—Violin wood.
- - Macher (Ger.).—Violin maker.
- - saite (Ger.).—Violin string.
- - sattel (Ger.).—Violin bridge.
- Genus tensile (Lat.).—Stringed instruments.
- Giusto.—Just, exact.
- Glisser (Fr.).—To slide.
- Glissando or Glissicando (It.).—Sliding.
- Grandioso (It.).—With grandeur.
- Grave (It.).—Slow and solemn.
- Gustoso (It.).—With taste.
- Halber Bogen oben (Ger.).—Top half of the bow.

- Halber Bogen unten (Ger.). —Lower half of the bow.  
 Harmonics.—See page 227.  
 Hausse (Fr.).—The nut of a violin bow.  
 Herstrich (Ger.).—A down bow.  
 Hinstrich (Ger.).—An up bow.  
 Il violino (It.).—The violin.  
 Imitando (It.).—Imitating.  
 Impetuoso (It.).—Impetuously.  
 Indeciso (It.).—In an undecided manner.  
 Index (Fr.).—The forefinger.  
 Kit.—A small pocket violin.  
 L'âme (Fr.).—Violin soundpost.  
 Lamentando (It.).—Mournfully.  
 Langsam, Sehr langsam (Ger.).—Slow, very slow.  
 Larghetto (It.).—In slow time; the diminutive of *largo*, being somewhat less slow.  
 Largo (It.).—Very slow and broadly.  
 Lebhaft (Ger.).—Lively and quick.  
 Legato (It.).—Joined or tied together. See page 187.  
 Legeremente, Leggiardo or Leggiero. — Lightly and gaily.  
 Lento (It.).—Slow.  
 Lentando (It.).—Becoming slower.  
 Linon (Greek).—A string.  
 L'istesso tempo.—The same time.  
 Loco (It.).—As it stands.  
 Lunga pausa (It.).—A long pause.  
 Ma (It.).—But.  
 Maestoso (It.).—Majestic.  
 Maggiore (It.).—The major key.  
 Majeur (Fr.).—The major key.  
 Marcato (It.).—Well marked.  
 Martelé (Fr.).—Hammered or strongly accented.  
 Martellando (It.).—Hammered or strongly accented. See page 194.  
 Meno (It.).—Less.  
 Mezza, Mezzo (It.).—Half.  
 Mineur (Fr.).—The minor.  
 Minore (It.).—The minor.  
 Mitte (Ger.).—Middle.  
 Moderato (It.).—In moderate time.  
 Molto (It.).—Much, very much.  
 Mordente (It.).—See page 235.  
 Morendo (It.).—Dying away.  
 Mosso (It.).—Moved.  
 Moto (It.).—Movement.  
 Movement.—A section of a symphony or sonata.  
 Mute.—A small piece of ivory, wood or brass, placed erect upon the bridge of a stringed instrument to soften the sound.  
 Non (It.).—Not.  
 Nut.—See CONSTRUCTION OF VIOLIN.  
 Obligato (It.).—Indispensable.  
 Obligé (Fr.).—Indispensable.  
 Opus (Lat.).—Work or composition; as Op. 25.

- Ottava Bassa (It.).—The octave below.  
 — Alta (It.).—The octave above.  
 Partie du violon (Fr.).—A violin part.  
 Pausa generale, or G.P.—A pause for all players.  
 Perdendosi (It.).—Decreasing in power and time.  
 Pesante (It.).—Heavily.  
 Piano, or p. (It.).—Soft.  
 Piu (It.).—More.  
 Pizzicato (It.).—Plucked or pinched notes. See page 233-4.  
 Poco (It.).—A little.  
 Ponticello (It.).—Near the bridge.  
 Poussé (Fr.).—Up bow.  
 Prima volta (It.).—The first time.  
 — vista (It.). — At first sight.  
 Primo (It.).—The first.  
 Presto (It.).—Fast.  
 Prestissimo (It.).—Very fast.  
 Quartet (Eng.). }  
 Quartett (Ger.). } A composition for 4  
 Quartetto (It.). } players.  
 Quatuor (Fr.). }  
 Quasi (It.).—Like, as if.  
 Queue (Fr.).—The tail-piece.  
 Quintett (Ger.).—A composition for five players.  
 Rallentando (It.).—Getting slower.  
 Rebec, Rebeb or Rebab.—An ancient fiddle of the East.  
 Recitando (It.).—Musical declamation, having no rhythmic melody.  
 Religioso (It.).—Religiously and solemnly.  
 Resonance. — Fullness of sound-vibration.  
 Ripieno (It.).—A part in the orchestra which only plays occasionally.  
 Ritardando (It.).—Gradually slackening the time.  
 Ritenuto (It.).—Kept back.  
 Risoluto (It.).—With resolution.  
 Rubato (It.).—"Robbed" time, i.e., with give-and-take in the time; not in strict time.  
 Saccade (Fr.).—A firm pressure of the violin bow against the strings.  
 Saiten-halter (Ger.).—Tail-piece of the violin.  
 Sautillé (Fr.).—Springing bow. See page 195.  
 Scagnello (It.).—The bridge of the violin.  
 Scala (It.).—A scale.  
 Scherzo (It.).—A playful piece.  
 Schwingung (Ger.).—Vibration of a string.  
 Segue (It.).—Comes after.  
 Sehr (Ger.).—Very.  
 Senza sordino (It.).—Without the mute.  
 Semplice (It.).—Simply.  
 Sempre (It.).—Always.  
 Septet (Eng.). }  
 Septetto (It.). } A composition for 7  
 Septuor (Fr.). } players.  
 Sextett (Ger.). }  
 Sextuor (Fr.). } A composition for 6  
 players.  
 Sforzando, sf. (It.).—Strongly accented.  
 Si leva il sordino (It.).—Take off the mute.

- Simile (It.).—In the same manner.  
 Smorzando (It.). — Dying away.  
 Solo, Sola.—For one player.  
 Sonore (Fr.).—Full.  
 Sordini, con (It.). — With mutes.  
 Sostenuto (It.).—Well sustained.  
 Sound-post.—A circular piece of wood placed perpendicularly between the back and breast of a violin under the bridge to convey sound. See page 33.  
 Spiccato (It.).—Separated, distinct, light and detached. See page 195.  
 Spitze (Ger.).—The point of the bow.  
 Staccato (It.).—Detached and short.  
 Steg (Ger.).—A violin bridge.  
 Stretto, Stringendo (It.).—Hurrying the time.  
 Strepitoso (It.).—Noisy.  
 Sur la quatrième corde (Fr.).—On the fourth string.  
 — la seconde corde (Fr.).—On the second string.  
 — una corda (It.).—On one string.  
 — une corde (Fr.).—On one string.  
 Syncopation. — Notes so joined as to prevent the accented part from being heard (usually effected by a slur or tie).  
 Tacet (Lat.).—Silence.  
 Takt (Ger.).—Measure.  
 Talon (Fr.).—The heel of the bow.  
 Tastiera (It.).—*Sulla tastiera*, over the finger-board.  
 Teneramente (It.). — Tenderly.  
 Tenuto or Ten. (It.).—Held down and sustained.  
 Tiré (Fr.).—Down-bow.  
 Trille (It.).—The shake.  
 Tranquillo (It.).—Tranquil.  
 Tremolo, or Tremolato (It.).—An extremely rapid repetition of one note. See page 183.  
 Trio (It.).—A composition for three performers.  
 Trillando (It.).—A succession of shakes on different notes.  
 Troppo (It.).—Too much, too.  
 Tutta forza (It.).—With full force.  
 Tutti (It.).—All the players.  
 Una corda (It.).—On one string.  
 Variazioni (It.).—Variations.  
 Veloce (It.).—With rapidity.  
 Viel.—An old name for an instrument of the violin class.  
 Vigoroso (It.).—Vigorously.  
 Virtuoso (It.).—A skilful and masterly performer.  
 Vivace (It.).—Lively, quickly and with spirit.  
 Vivo (It.).—Animated and quick.  
 Volante (It.).—Flying.  
 Volte subito, V.S. (It.).—Turn over quickly.  
 Wirbel (Ger.).—Violin peg.  
 Wolf.—Notes which are false in intonation.

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